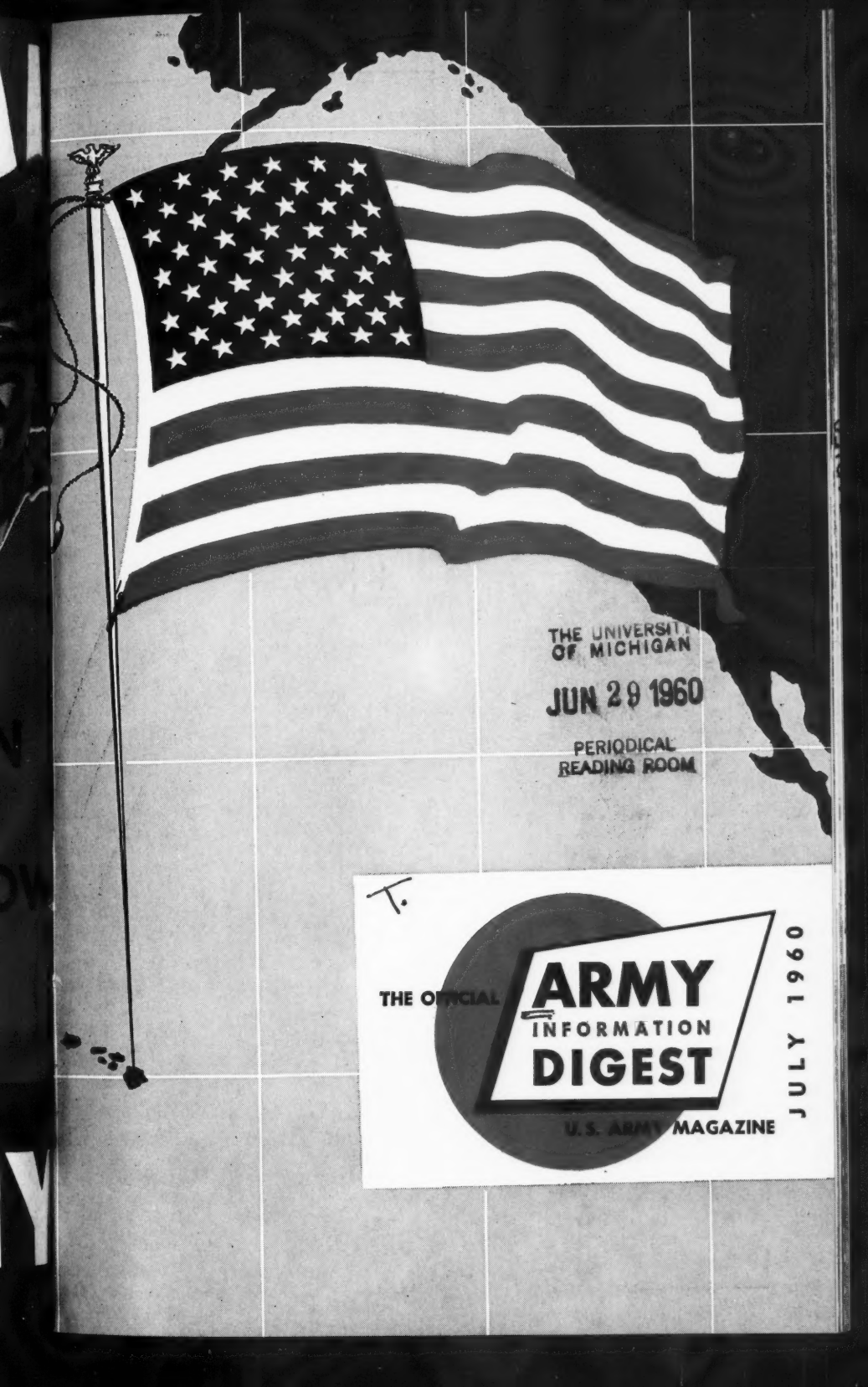



THE OFFICIAL

# ARMY INFORMATION DIGEST

U.S. ARMY MAGAZINE

JULY 1960

# ARMY INFORMATION DIGEST

THE OFFICIAL MAGAZINE OF THE DEPARTMENT OF THE ARMY


The mission of ARMY INFORMATION DIGEST is to keep personnel of the Army aware of trends and developments of professional concern. The Digest is published under supervision of the Army Chief of Information to provide timely and authoritative information on policies, plans, operations, and technical developments of the Department of the Army to the Active Army, Army National Guard, and Army Reserve. It also serves as a vehicle for timely expression of the views of the Secretary of the Army and the Chief of Staff and assists in the achievement of information objectives of the Army.




Use of funds for printing this publication approved by Director, Bureau of the Budget, 8 May 1957.

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**COVER: Hawaii, which becomes the 50th star in the U. S. Flag this Independence Day, is also a strategic bastion of U. S. defense. Other articles commemorate the Army Flag, the oldest Regular unit, and anniversaries of Signal Corps and Postal Service.**

## COMMAND LI

## *Army Views On Vital Issues*

### ON ADVANCE PLANNING

**"In order to be ready for any eventuality, t Army must think in terms of what conditions will face years hence, and what will be requir to cope with them. For example, it must visualiz now what weapons and equipment, and in wh quantities, it must have in order to carry out i mission five or ten years from now, and it mus take positive action to set in motion all program necessary to create them, and to make sure the will actually be in the hands of troops when an where they are needed."**

***Secretary of the Army Wilber M. Brucker at the Army Management School Fort Belvoir, Virginia, 1 March 1960***

### ON SELF-RELIANCE IN NUCLEAR WAR

**"In order to minimize the effectiveness of a enemy's nuclear firepower, our units would be dis persed over a much larger area than was the cas in World War II or the Korean War. One of th consequences of increased dispersion is that in filtration by both sides must be expected. Ground combat would be conducted in a battle *zone*, rath er than along a 'front line,' as in the past. As a result, units would have to be more completely self-sustained, and their members would be called upon to exercise an even higher degree of individ ual self-reliance."**

***General Lyman L. Lemnitzer, Army Chief of Staff before the National Rifle Association Washington, D. C., 23 March 1960***

### ON ALLIED UNITY

**"American soldiers, sailors, marines, and air men in friendly countries overseas are symbolic of our national determination to stand shoulder-to-shoulder with our Allies against a common threat, come what may. Unlike an ICBM or strategic bomber based far away, our overseas forces can be seen, on the ground, where they serve as tangible evidence of our good faith."**

***General George H. Decker, Army Vice Chief of Staff, before Lafayette College Alumni Philadelphia, Pennsylvania, 22 April 1960***

## FEATURES



## BRIEFS



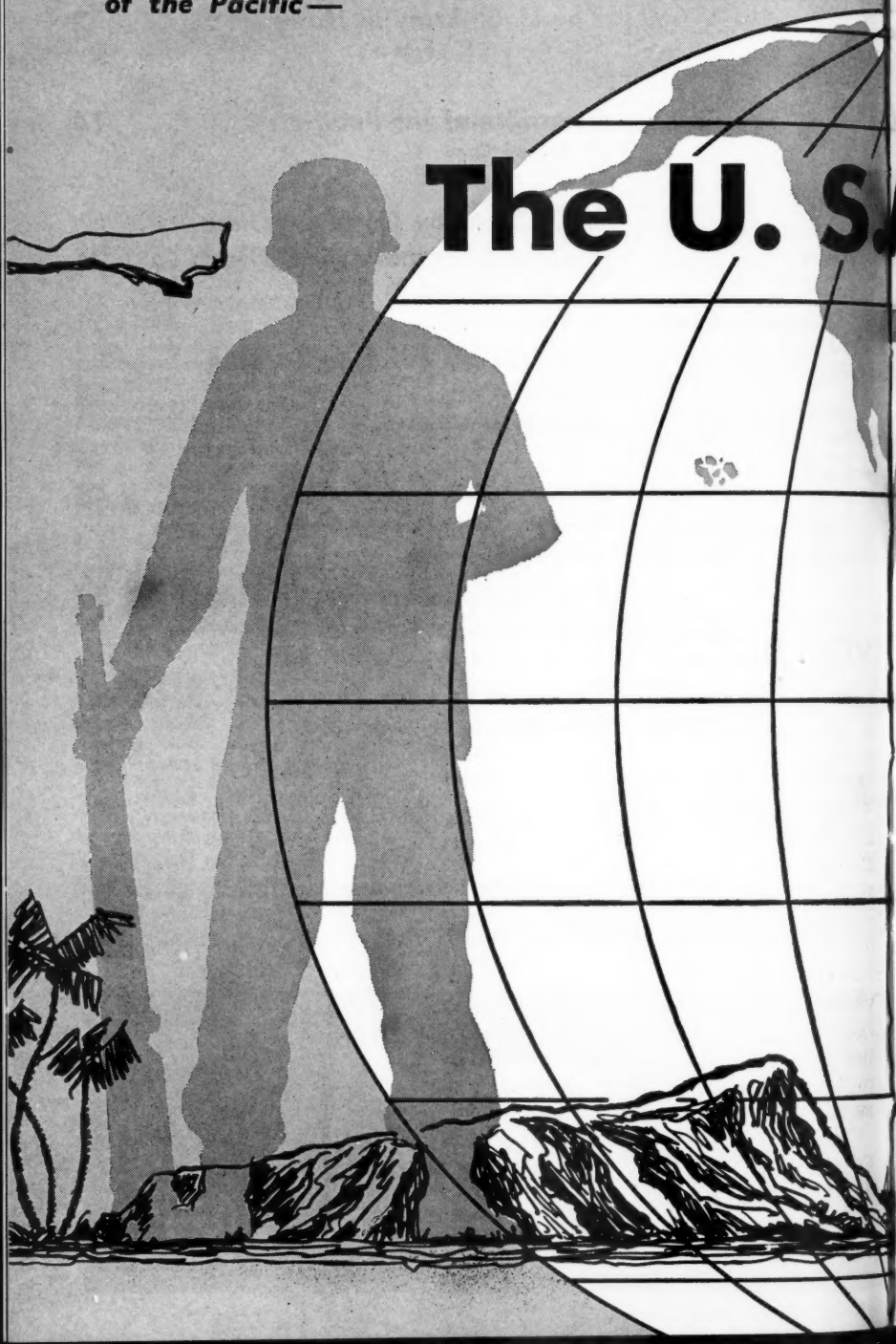


THE OFFICIAL ARMY INFORMATION DIGEST
U. S. ARMY MAGAZINE

JULY 1960
VOLUME 15 NUMBER 7

*Sentry at the crossroads*

*of the Pacific—*



# The U. S. A

# U.S. Army in Hawaii

**Major General J. E. Theimer**

AMONG swaying palms and sandy ocean beaches, the United States Army Hawaii and the 25th Infantry Division are working and training hard on a combat mission. Here, at the crossroads of the Pacific, Army ground, air defense and support units are deployed forward as a deterrent to aggression. In the event of hostilities, they are ready to move into combat—ready to fight—at a moment's notice.

To meet the threat of continued Communist aggression in Southeast Asia and the Pacific area, the United States has not only deployed its forces in strategic locations in the Pacific but has entered into alliance with the free nations of Southeast Asia for mutual defense. It is providing these nations with economic and military assistance as well. The United States and its allies have served notice to the Communists that a breach of peace will be met, not with appeasement, but with the powerful force of arms of nations determined to remain free.

Utilizing the strategic location of our newest state, the United States has designated Hawaii as the command post for all operations in the Pacific Ocean area.

Commanding all Army forces in the Pacific Command is General I. D. White, Commander-in-Chief, United States Army, Pacific (USARPAC) with headquarters at Fort Shafter, at the outskirts of Honolulu.

The huge USARPAC command stretches across the Pacific from Hawaii's shores to Korea, where troops face enemy weapons across the demilitarized zone. It includes all soldiers stationed in Hawaii, Okinawa, Korea, Taiwan and Japan. (See "U.S. Army Pacific," May 1958 DIGEST.)

### Mission of U. S. Army, Hawaii

UNDER USARPAC is the United States Army, Hawaii (USARHAW) whose mission is:

- To command all assigned U. S. Army elements in the Hawaiian Area and support Headquarters, U. S. Army, Pacific.
- To provide and maintain facilities for an infantry division; administer and train reserve components of the Army stationed in Hawaii, the Philippines, and Guam; and support the military assistance program as directed.
- To be prepared to implement mobilization plans, and support contingency operations of the 25th Infantry Division.
- To establish, operate, and maintain as directed, combined arms training facilities within the Hawaiian Area.
- To provide operational, logistical, and administrative support for assigned or attached elements in the Hawaiian and Pacific Area and to other military services or governmental agencies as may be directed.
- To operate a general hospital for use of military and other authorized personnel within the Hawaiian Area.

HUB of the Army's multiple activities in the island chain is Schofield Barracks, founded in 1908, and situated on a plateau between Oahu's two mountain ranges.

Located at Schofield Barracks are headquarters of the United States Army, Hawaii, and the 25th Infantry Division. This Division, the Pacific command's strategic Army reserve force, accounts for almost three-quarters of the Army personnel in Hawaii.

Keeping the Division mobile, combat-ready, and poised to strike anywhere, anytime is USARHAW's most important mission.

**MAJOR GENERAL J. E. THEIMER**
**Commanding General,**
**United States Army, Hawaii**

## "Tropic Lightning"

ORGANIZED at Schofield Barracks in October 1941, the 25th Infantry Division received its baptism of fire when less than ten weeks old. The first Army unit to exchange fire with the enemy, the Division fired on invading Japanese aircraft and occupied defensive beach positions even before war was declared.

Following defensive operations on Oahu and intensive training in jungle warfare, the Division was committed to combat in the fall of 1942. Victory followed victory as it moved swiftly through a series of Pacific island campaigns, including Guadalcanal and New Georgia. Its striking force earned its nickname —"Tropic Lightning" Division.

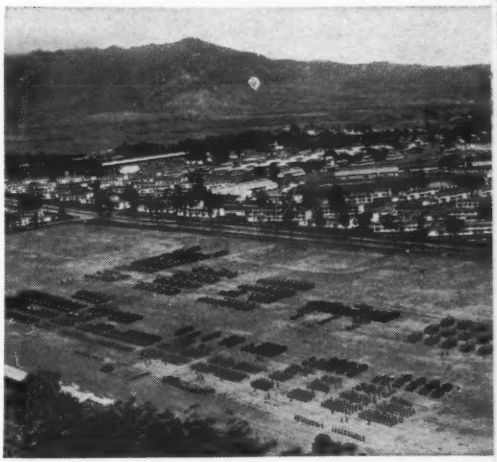
Garrisoned in Japan for post-war occupation duty, the Division was one of the first Army units ordered to Korea in 1950, where it lived up to the precedents of gallantry established during World War II. "Lightningaires" battled through more than 800 days of combat in Korea, earning fourteen Medals of Honor and two Republic of Korea Presidential Citations.

Since returning to Hawaii in 1954, the 25th has undergone two reorganizations designed to increase its mobility and flexibility for tomorrow's battlefield. Recently a battle group of the 503d Airborne Infantry was assigned to the Division and deployed to Okinawa, where it serves as the Tropic Lightning's forward deployed element.

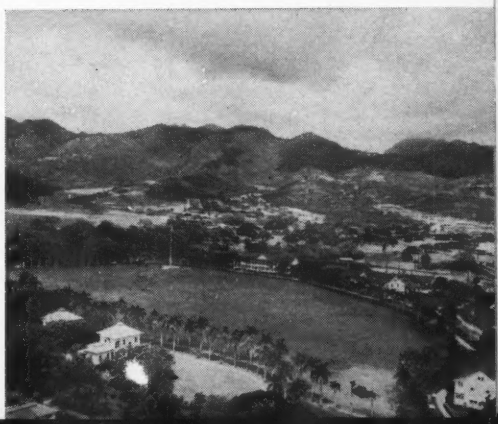
## Diversified Training

TODAY'S Lightningaires know that only a combination of highly developed military skills and close-knit unit teamwork will spell success in combat. They approach the

National Memorial Cemetery of the Pacific lies within crater of extinct volcano. In background are Diamond Head and Honolulu.



Reinforced battle group of 25th Division forms at Fort Schofield, above. Historic Fort Shafter below is headquarters of USARPAC.



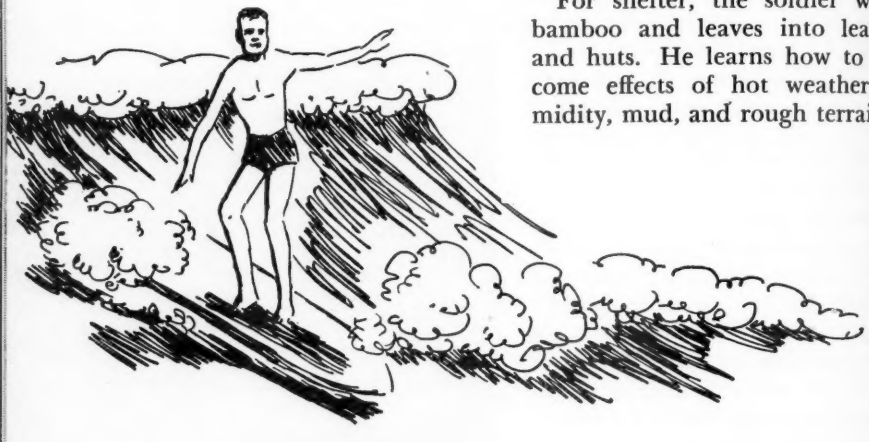
rugged, diverse training with unparalleled enthusiasm and esprit.

Training is as rugged as the terrain and as constant as the trade winds. A unique blend of tropical climate and a peculiar topography have created a variety of terrain features on Oahu. Just a few miles from the sandy beaches are volcanic mountains, exposed rocky cliffs, forest-covered ridges, gullies and lush tropical jungles—a variety of terrain not unlike that which the Division would encounter if committed to action in Southeast Asia.

Once each year every member of the Division undergoes a course designed to prepare him for survival and combat in jungle and mountainous terrain.

Training begins with a three-day period of instruction, during which the student learns basic individual skills and techniques for movement through both jungle and mountain terrain. He learns to distinguish edible from non-edible fruits, how to get water from vines and food by trapping small animals and fish.

For shelter, the soldier weaves bamboo and leaves into lean-to's and huts. He learns how to overcome effects of hot weather, humidity, mud, and rough terrain.



Once a key in Hawaiian defenses, Fort DeRussy now serves as off-duty recreation center for men of all services.

Self-confidence and skill are fostered at the basic mountaineering station, where Lightningaires learn such techniques as rappelling on sheer cliffs, use of vertical hauling lines for transporting equipment, and jungle navigation.

This specialized training is climaxed by a week-long exercise which confronts the soldier with the tortuous difficulties of combat in jungle terrain without support of ground vehicles. Helicopters are provided for resupply and evacuation and for minor tactical moves; but for the most part, the exercise is designed to require a reinforced battle group to operate on foot in jungle-type terrain.

Army Transportation Terminal, Honolulu, is modern port facility that handles thousands of troops and dependents, tons of supplies.

### Field Training

TROPICAL training is required in addition to, not as a substitute for, normal tactical training. The annual cycle of training includes range firing and individual training in basic military skills, followed by squad, platoon, company and, finally, battalion and battle group level tactical training.

Frequent command post exercises, testing the mobility, communications, and efficiency of headquarters units, and small unit tactical training are conducted in various areas on Oahu. Full-scale battle group Army Training Tests, complete with armor and artillery support, require more space. For these, USARHAW maintains the Pohakuloa Training Area on the island of Hawaii, 200 miles southeast of Oahu.

The Pohakuloa Training Area lies in a saddle between the highest peaks in the islands, Mauna Kea and Mauna Loa, not far from the volcanic eruptions which occurred earlier this year at Kapoho. Sharp *aa* and *pahoehoe* lava, volcanic ash, and sparse vegetation create a landscape that is tough on wheels and shoe leather.

Moves to the area from Oahu familiarize troops with loading and unloading from LSTs and aircraft. The area itself provides an excellent training ground for helicopter airlift operations, air reconnaissance missions and para-delivery problems.

The isolation of Pohakuloa from densely populated areas permits the Division Artillery, commanded by Brigadier General Jonathan O. Seaman, to fire not only howitzers but the Honest John rocket as well, in tactical problems. Training tests usually culminate in an assault, supported by firepower of a combined arms team.

### Alert and Ready

ALTHOUGH high training and maintenance standards insure its combat-readiness at all times, the

Division's role as the strategic Army reserve force in the Pacific calls for special measures to ensure that troops are ready for movement at a moment's notice.

Each month, one Battle Group is designated as the alert unit and stands by, ready to go. Preinspected equipment is packed and ready to load, and vehicles are earmarked for immediate operation. One other Battle Group is designated as the secondary alert unit, forming a ready-to-move Brigade.

At least once during the same month, this secondary Battle Group undergoes a practice alert, executing all movement procedures ranging from simulated inoculation against diseases prevalent in possible areas of operation, to actual loading into mock-ups of aircraft.

Periodically, a full Brigade Task Force Alert is called. This includes the Brigade Headquarters, commanded by Brigadier General Vernon P. Mock, the Assistant Division Commander, both the primary and secondary alert Battle Groups and necessary support personnel.

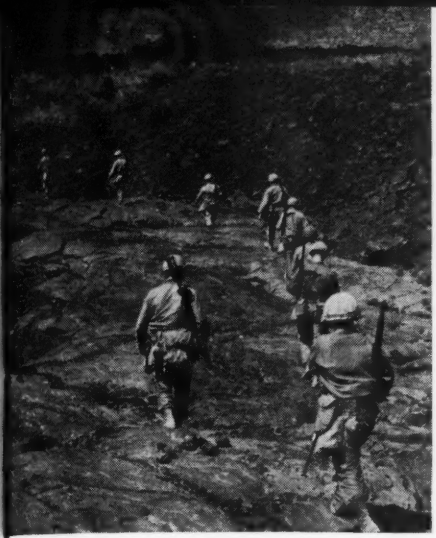
In one such move last year, troops were loaded and moved to Hickam Air Force Base, where they boarded C-124 Globemasters. The alert was performed so swiftly and with such realism that many local people, despite full explanations in the newspapers, believed that "trouble" had started.

### Joint and Allied Activities

IN ADDITION to its activities in direct support of U. S. defense aims, the command is a continuous host to visiting officers and noncommissioned officers from Australia, New Zealand, Thailand, Vietnam, Cambodia, Indonesia, Taiwan, Korea and the Philippines. At Schofield Barracks and at Tripler Army Hospital these visitors observe, and often participate in, training.

As part of the Army's Military Assistance Program, many allied military personnel attend one of several schools located at Schofield. The Ordnance School, Signal School, CBR Warfare School and NCO Academy all boast graduates from trans-Pacific allied nations.

**One of the largest service medical installations in the United States, Tripler U. S. Army hospital is complete 1,500-bed medical center administering to all services.**



Over lava beds thrown out by Mauna Loa in background or up steep jungle trails of Koolau Range, Tropic Lightningaires maintain readiness in rugged training.

Last year, elements of the 25th Infantry Division crossed the Pacific to participate in joint exercises with two SEATO nations. Exercise Kitisena, in conjunction with the Royal Thai Army, and Exercise Handa, with the Philippine Army, familiarized Lightningaires with terrain in Southeast Asia and permitted them to work closely with SEATO allies. Commanders exchanged tactical concepts and worked out joint intelligence, communications, and command procedures that would prove invaluable in the event of war.

### Logistics Support

SUPPORTING the Division and Headquarters, U. S. Army, Pacific, is a large logistics complex, operating at a number of installations on Oahu, which provides essential materiel and maintenance.

The various technical services of USARHAW have a dual responsibility. While performing essential tasks of supplying troops and maintaining facilities in Hawaii, they must be prepared at any time to deliver supply and maintenance support to the Tropic Lightning Division, anywhere in the world.

Communications is a vital link in the modern Army, and Hawaii's strategic location in the mid-Pacific make Signal operations especially important. Keeping messages moving smoothly to all installations on Oahu and other major islands is only part of the job. Located at Helemano Military Reservation, near Schofield Barracks, is a prime relay station in the Army Command and Administrative Network. The post also serves as Headquarters, United States Army Security Agency, Pacific.

The Division's firepower and tactical mobility is ably provided by a large Ordnance operation. Shops at both Schofield and Fort Shafter and an ammunition storage depot at Aliamanu Military Reservation, located in the crater of an extinct volcano, insure that weapons and vehicles of the Division are continually ready for combat missions.

In tropical downpour, Tropic Lightning patrol makes its way along cliffside path, carrying equipment in annual mobility problem.

Despite increasing reliance on air transportation for troops, thousands of soldiers and tons of cargo pass through the Army Transportation Terminal each year. An interior railroad moves supplies into nearby Quartermaster warehouses, while Army vehicles provide a common-use land transportation system, carrying goods to all military installations on Oahu. This busy port facility was much used during World War II and the Korean War and it is ready today to move 25th Division troops and supplies, if necessary.

A strong uniting force between the Army and the people of Hawaii is symbolized by the Army-operated National Memorial Cemetery of the Pacific in Punchbowl Crater, overlooking downtown Honolulu. This 112-acre shrine, dedicated in 1949 on the fourth anniversary of V-J day, is the resting place of some 14,000 dead of World War II and Korea—an eternal monument to patriotism and devotion, reminding all of the price of freedom.

### Reserve Component Role

TWO installations in Honolulu, administered by USARHAW, represent other important missions of the command. They are Fort DeRussy, which houses the U.S. Army Reserve headquarters, and Fort Ruger, on the slopes of nearby Diamond Head, headquarters of the Hawaii Army National Guard.

In Hawaii, the "One Army" concept is not new. Active Army personnel have worked closely with the Army National Guard and Army Reserve since their inception in the islands. Today advisory groups on every island of the archipelago help both organizations plan and coordinate their activities.

The principal Army Reserve unit in the islands is the 100th Battle Group, 442d Infantry. The numerical designation has been retained from the much-decorated "Go For Broke!" unit, composed of Nisei soldiers, which fought with great valor in Europe during World War II, and brought fame and glory to Hawaii.

The 29th Infantry Brigade of the Army National Guard is composed of two battle groups of the 298th Infantry with support units. Activated in 1940, the 298th saw combat in the New Hebrides Islands of the South Pacific during World War II. Today, units of the two battle groups are located on each of Hawaii's five major islands.

A new and important mission of the Army National Guard will be manning the six Nike-Hercules sites on Oahu, protecting potential target areas. Now under construction, the first sites will be ready this fall.

A Reserve Officers Training Corps Instructor Group supervises military training at the University of Hawaii and eight local high schools. These schools have consistently produced high-quality ROTC graduates, many of whom have achieved distinguished careers in the Army. Participants in these programs, together with Army Reserve and National Guard personnel, total nearly 10,000.

Recruits from Hawaii and Guam receive basic training and advanced individual training for the Light Weapons Infantryman MOS at Schofield Barracks Replacement Training Center. This center, organized in 1951 to train troops for Korea, turned out more than 25,000 young soldiers, many of whom went directly into combat units.

Although the crisis which gave birth to the center has diminished, rugged training standards have been maintained and today's trainees are developed into the same tough, skilled soldiers that man the 25th Infantry Division.

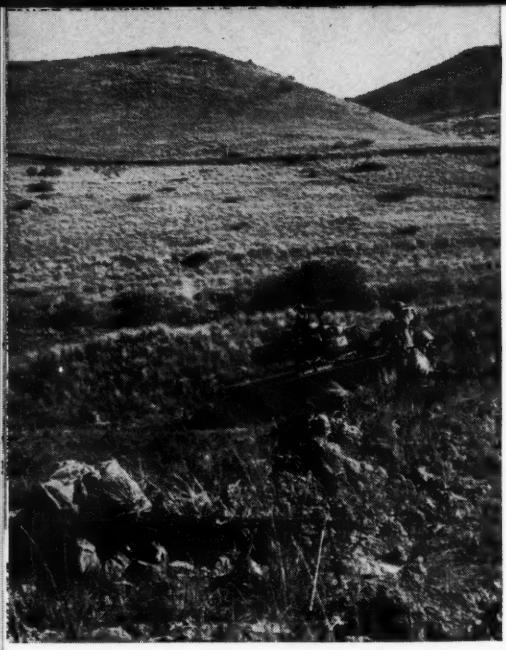
### The Army Community

A MODERN, 14-story, 1500-bed medical center, located on the slopes of the Koolau mountains near Fort Shafter, is USARHAW's third major installation on Oahu. Tripler U. S. Army Hospital, a complete Army post commanded by Major General Jack W. Schwartz, annually cares for thousands of patients from all services, as well as veterans and members of the U. S. Merchant Marine. During the fighting in Korea, more than 65,000 air evacuees were flown to Tripler for medical treatment.

Hawaii offiers many unique educational opportunities and recreational facilities. In addition to normal USAFI and MOS-related courses offered at education centers, personnel may enroll in University of Hawaii extension courses at both Schofield and Fort Shafter. Many prefer to take on-campus courses, utilizing the Army's tuition assistance program. During 1959, Army personnel completed more than 3,000 educational development courses and an additional 1,000 MOS-related subjects.

Recreational facilities include service clubs and theaters at each post. Libraries at Schofield Barracks, Fort Shafter and Fort DeRussy provide profitable leisure for both adults and children. Special Services last year presented an average of two shows per week in the command, and craft shops at Fort

"Once each year every member of the Division undergoes a course designed to prepare him for survival and combat in jungle and mountain terrain."



Grueling field problems test combat knowledge and readiness of 25th Division during annual training at Pohakuloa area.

Shafter and Schofield afforded outlets for creative expression.

Dads' Clubs at both posts conduct a full recreation program for dependents under eighteen. Scout troops, Cub packs, teen-age and pre-teen clubs plan numerous activities throughout the year. The Dads' Clubs sponsor an extensive athletic program that includes Little League, Babe Ruth League, and Pop Warner League teams, and two record-breaking swim teams.

Athletics develop soldierly teamwork and physical fitness, and athletic participation is encouraged. Major and minor sports of all kinds are seconded by the fair-weather climate and fill out a full calendar of intra-mural and command-wide competition. The sportsman also finds a variety of activities in Hawaii — surfing, deep-sea fishing, mountain-climbing, and year-around golf.

Because of its insular character and relative isolation, Hawaii poses a peculiar problem for the absorption of accrued leave time. To meet this need, USARHAW maintains several recreation centers which offer inexpensive and comfortable accommodations to vacationing soldiers and dependents.

The Armed Forces Recreation Center at Fort DeRussy, administered by the Army but serving the men of all the uniformed services and their dependents, is located on famous Waikiki Beach. More than a million visits each year attest to the center's popularity.

In addition, the Army administers a rest camp at Waianae Beach, a beautiful ocean site with inexpensive cabins and mess facilities on leeward Oahu. On the island of Hawaii, at the edge of Hawaii National Park overlooking Kilauea Crater (which erupted last fall in a dazzling display of volcanic activity), Kilauea Military Camp offers vacations at low prices to members of the Armed Forces. In addition to housing and basic recreational facilities, the Camp offers daily tours of the island and such tourist attractions as black sand beaches, giant fern forests and the Halemaumau fire pit.

### Community Relations

MORE than 30,000 Army personnel and dependents on Oahu live and work harmoniously with the civilian community. *Aloha* means warmth and friendship, and Hawaii lives up to its name, "The Aloha State."

This harmony stems in part from the extremely active role of soldiers and their families in community affairs. Army personnel are active

in PTA, YMCA, 4-H Clubs, Rotary Clubs, and virtually every civic, fraternal and professional organization in the islands.

An Army Advisory Committee, composed of civilian leaders from every walk of life, helps build close ties between the Army and civilian activities. Boy Scouts and Civil Air Patrol use Army facilities. In off-duty time, Hawaii-based soldiers play in the Honolulu Symphony Orchestra and appear frequently in Honolulu Community Theater productions.

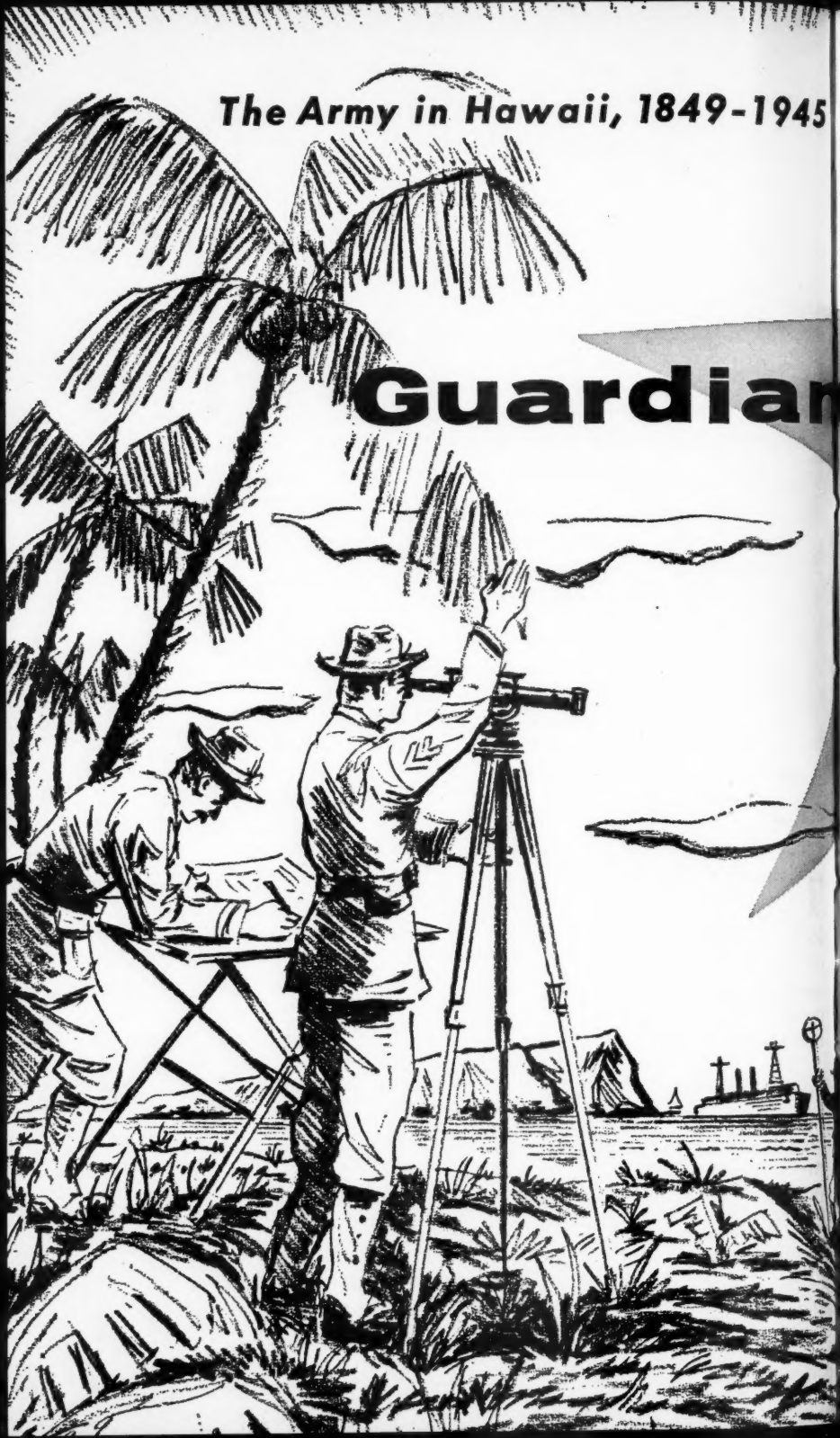
Here, as elsewhere, the Army stands ready to give aid in case of emergency. The Army Rescue Team performs rescue missions involving civilian as well as military personnel. Trained in mountain climbing and underwater rescue techniques, the Team is familiar with the terrain of each of the major islands, and maintains a direct line to the Hawaiian Sea Frontier, the inter-service coordinating agency which may send them on their way within minutes to carry out a rescue mission. Team members have saved more than 100 lives in the past six years, and have earned three Soldier's Medals for extraordinary courage and determination.

Emphasizing jungle warfare training, a patrol of Tropic Lightningaires moves through dense growth of Koolau Range in recent exercise.

## Trained and Ready

IT IS a truism that the price of freedom is eternal vigilance. Here in Hawaii, despite the relaxed tropical setting of one of America's famed vacationlands, the Army is working continuously to be ever-ready to defend the Nation. The soldiers of the U. S. Army, Hawaii and the Tropic Lightning Division work and train relentlessly, day and night, to perform their missions. Guardians of the Pacific, they are ready to move and to fight anywhere, anytime.

Under camouflaged helmet, 21st Infantry soldier is equipped with mask to protect against possible CBR attack.


The Army in Hawaii, 1849-1945
Guardian

# 50

# ...of the Pacific

**Dr. Stetson Conn**

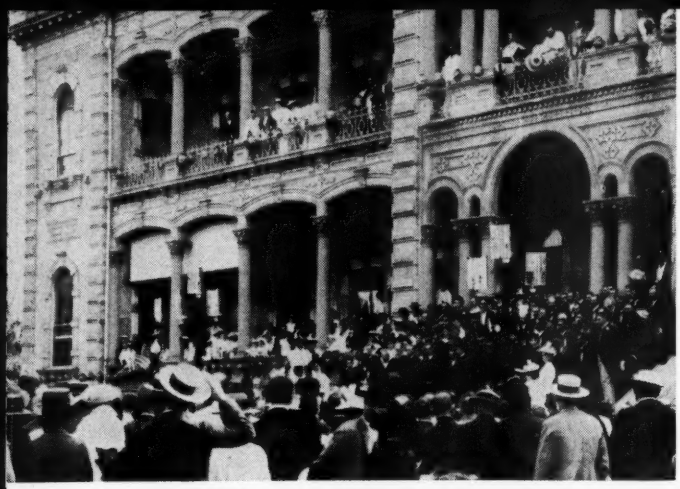
THE United States Army made its first appearance in Hawaii in May 1849, when two companies of the 1st Artillery Regiment stopped at Honolulu for refreshment after the long voyage from the Atlantic around Cape Horn.

The men of these companies, on their way to Oregon, found much to remind them of home in the capital of the Hawaiian kingdom. American trading and whaling ships had been visiting the Hawaiian Islands in increasing numbers for more than half a century, and the arrival of American missionaries in 1820 helped to give Honolulu some of the social and architectural aspects of New England.

U. S. naval vessels made Honolulu a frequent port of call, and by 1840 some 400 American whalers were visiting the islands every year. Two years later the United States Government took official note of its interest in Hawaii—an interest which became much stronger after the annexation of California completed American continental expansion to the Pacific coast.

The first attempt to annex Hawaii came in 1854, but while the Hawaiians were willing, too many in the United States were not.

*DR. STETSON CONN is Chief Historian, Department of the Army.*



Reading proclamation of new Republic of Hawaii is President Dole who took office after overthrow of native dynasty in 1893.

After the Civil War, American interest in Hawaii revived. The advent of steamships had given new importance to Honolulu as a coaling station, and officers of the U. S. Navy had their eyes on Pearl Harbor, a large and land-locked lagoon seven miles to the west of Honolulu, as a potential naval base.

In the winter of 1872 Maj. Gen. John M. Schofield, commander of the Army's Military Division of the Pacific, in company with a Navy officer and Army engineer, spent three months in Hawaii studying the military value of the islands and the feasibility of developing Pearl Harbor as a naval base. General Schofield's report became the basis of subsequent military planning for Hawaii, and some years later the principal Army post on Oahu was to be named after him.

Three years after his visit, the United States and Hawaii concluded a reciprocity treaty which cemented economic relations so firmly that political union became all but inevitable. In renewing this treaty in 1887 the United States obtained exclusive right to use Pearl Harbor as a naval station.

Despite these long strides toward union, it took the impetus of the Spanish-American War to bring about the annexation of Hawaii. Hawaiians of American descent, with help from the American minister and the U. S. Navy, overthrew the native dynasty in 1893, but the leaders of the new republic could not persuade the administration of Grover Cleveland to annex the islands. They bided their time, until operations during the Spanish war convinced enough Americans that Hawaii must become a part of the United States.

### Annexation

ON 1 June 1898 an Army expeditionary force on its way to the Philippines stopped off at Honolulu, and other troops soon followed. The islands became American on 7 July when President McKinley signed a joint resolution of Congress approving annexation, to which the Hawaiians had already agreed.

Five days later the Army ordered the attachment of the islands to its Department of California, and the first Army garrison for Hawaii sailed from San Francisco at the

end of July. Its commander, Col. Thomas H. Barber, and some of the troops participated in a formal annexation ceremony in Honolulu on 12 August. Within the next few days these troops—the 1st New York Volunteer Infantry and the 3d Battalion, 2d U.S. Volunteer Engineers—established Camp McKinley as the first Army post in Hawaii, located between Waikiki Beach and Diamond Head.

For the next ten years the Hawaiian garrison was small, although its soldiers were busily engaged in preparing the island of Oahu for a much larger military establishment. Army engineers made a careful survey of the whole island, and helped to select sites of more permanent military posts and forts and begin construction on them.

A large area three miles northwest of downtown Honolulu was obtained by the Army for a central military post; this became Fort Shafter, first occupied in 1907 and the site of Army headquarters in Hawaii since then. It also was to become the principal antiaircraft artillery post.

The decision of the Army-Navy Joint Board in January 1908 to locate the main Pacific naval base at Pearl Harbor rather than in the Philippines gave impetus to the construction, equipment, and manning of the coast artillery forts along the south coast needed to protect the port of Honolulu and the new Pearl Harbor base. In order westward these were FORT RUGER, inclosing Diamond Head; FORT DE RUSSY at Waikiki Beach, which became the coast artillery headquarters; FORT ARMSTRONG, guarding Honolulu harbor; FORT KAMEHAMEHA, first called Fort Upton and almost immediately renamed after the first king of Hawaii, which as the guardian of the Pearl Harbor entrance from the eastern side became the largest and most potent of the forts; and FORTS WEAVER and BARRETTE, built later to guard the west side of the Pearl channel. All but the latter two had been established as active Army posts by 1909, and troops to man their guns accounted for much of the rapid increase in the Hawaiian garrison after 1908.

Small but bustling city of Honolulu was already an important seaport when U. S. troops made landing to participate in annexation ceremony on 12 August 1898.

A landfall on Islands meant chance for shore training for this battalion from USS *Bestin* on visit to Oahu in 1893.

In the latter year, the Army also began construction of Schofield Barracks as the main post for mobile combat forces, on a large inland tract about twenty miles northwest of Honolulu. By 1913 the Army garrison numbered about 7,000 officers and enlisted men. On 15 February of that year the Army established the Hawaiian Department as one of its major field commands reporting directly to the War Department in Washington. The opening of the Panama Canal in the following year made Oahu even more important as the principal base for protecting American interests in the Pacific.

### Territorial Status

AN ACT of Congress of 1900 had made Hawaii a fully incorporated territory of the United States, and conferred American citizenship on its people. The population then as now was something of a racial kaleidoscope, with native Hawaiians already in the minority and the largest single element of Japanese descent.

Japan indeed had protested the annexation of the islands by the United States, and the new rivalry and friction that developed between the two nations after 1905 made Japan the most likely enemy of the United States in a Pacific war and thus the principal threat to Hawaii. The continued presence of a large minority of residents of Japanese descent was to be an important factor—as events in World War II were to demonstrate—in military plans and preparations for the defense of the islands.

In World War I, though, Japan was the ally and not the enemy of the United States, and Hawaii temporarily became a backwater area in operations of the U. S. Army. After the United States entered the war, most of the Regular Army garrison was withdrawn to the mainland for more active service. In the meantime the territorial government had expanded its National Guard to 5,000 men, and in 1918 two regiments of the Guard were inducted into Federal service to help replace the Regulars. All together more than 9,000 Hawaiians served in the Army in World War I, although not many reached the fighting fronts in Europe. Perhaps the most notable Army development in Hawaii during the war was the establishment of an aviation center, first at Fort Kamehameha and then at Luke Field on Ford Island in Pearl Harbor.

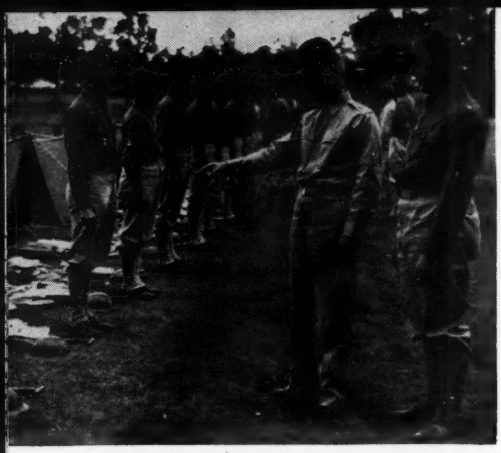
By 1921 the Regulars were back in Hawaii in strength. In that year the Army activated the Hawaiian Division and also the Hawaiian Antiaircraft Regiment, the latter being the first organization of its kind in the U. S. Army. By 1925 the Hawaiian Department had a strength of 14,717, or considerably more than a tenth of the whole active Army. Aviation had become an important element of the Army garrison. Wheeler Field, a new base for pursuit aviation adjacent to Schofield Barracks, had been opened in 1922, and five years later an Army plane made the first completed flight between the mainland and Hawaii.

The Navy had begun construction of a drydock at Pearl Harbor back in 1909, but the base was still far from ready for servicing a fleet in the mid-1920's, as demonstrated in maneuvers during which only a few of the battleships could find berths there. Yet the value of the base was clearly recognized, the Secretary of War reporting in 1925 that "Oahu constitutes an outpost and base of tremendous strategic importance for defensive purposes, from which the trade routes from Asia and America may be controlled and our Pacific coast protected." It would also be the indispensable base in the event of war with Japan.

### Role in Pacific Strategy

RELATIONS between the United States and Japan began to take a new turn for the worse after the Washington Conference of 1922, but it was the military aggressions of Japan from 1931 onward that led the United States to expand and strengthen its Oahu military bastion. By 1938 the Navy had spent about $75,000,000 on the Pearl Harbor base, and the Army more than twice that amount on military installations to protect it. The latter included Hickam Field, a new base for Army bombers adjacent to Fort Kamehameha, which permitted the Army to release its Ford Island field to the Navy.

**Caissons roll behind prime movers, demonstrating mechanization advancement of Battery "D", 8th Field Artillery in 1934 as troops pass in review at Schofield Barracks.**



**With World War II underway in Europe and events marching to a climax in Far East, Army troops on Oahu doubled between 1939-41.**

During the later 1930's the Army accorded the Hawaiian Department a top priority in the supply of equipment, and it increased the strength of the Army garrison by 50 percent, to a total of about 21,500 officers and enlisted men by the summer of 1939.

On the day that Germany started a new world war by attacking Poland, 1 September 1939, the commander of the Hawaiian Department, after taking stock of his local outlook, informally wrote to the Chief of Staff that he would not "want to be given the job of cracking the nut" which Oahu presented to any would-be invader, because of its "encircling reefs and two coasts protected by very difficult small mountain ranges and the south shore very heavily armed," and thus with the "prospect of fighting an entrenched division all the way across after landing on the north shore."

He admitted that the rapid development of military aviation had made Oahu difficult to defend against air attack, but expressed the belief that airplane carriers could "not live in these waters as long as we have left any bombers at all," and anyway he felt "that naval air forces, like the cavalry of old, always had in mind, the getaway." The general's optimism about Oahu's relative invulnerability appears to have been well-founded, but two years later the Japanese certainly belied his observation about carriers.

## World War II Activity

DURING the next two years the Army and Navy intensified their efforts to make Oahu impregnable and the naval base fully usable for war. From the spring of 1940 onward the Navy kept the Pacific fleet based on Pearl Harbor, and an alert of the defenses in June of that year seemed to indicate that they were ready for action.

The overriding mission of the Army continued to be the protection of Pearl Harbor from enemy attack, and only a few troops were stationed in the outer islands before the outbreak of war. The number of Army troops on Oahu doubled between 1939 and 1941.

Late in 1941 the Army made two new divisions, the 24th and 25th, out of the Hawaiian Division, and a stream of new units was coming from the mainland. But many of the new soldiers and units were only partially trained, and there were serious shortages in equipment, especially of antiaircraft guns and heavy bombers.

The United States had expected that Japan might strike without warning in the Pacific; however, the six carriers and 355 airplanes that the Japanese used against Pearl Harbor on 7 December 1941 were far more than American military estimates had conceived to be

possible for an enemy to launch.

Even if the defending forces had been fully alerted, they were not strong enough to have prevented such an enemy attack from doing great damage. The damage to the Pacific fleet and to the naval and surrounding air bases is too well known to repeat here. While the Navy suffered most, the Army lost about 230 men killed and half that number seriously wounded, and more than half of the Army's planes were destroyed or badly damaged.

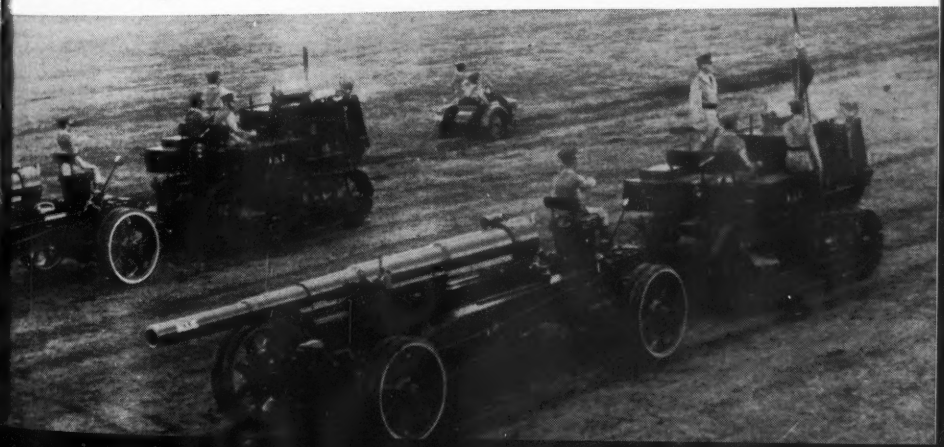
Although Army forces could do little to combat the onslaught from the air, they moved with speed and precision to resist an invasion, if that were to follow. The threat of invasion and uncertainty as to how Oahu's 118,000 residents of Japanese descent would act led to the establishment of martial law, with the Army commander serving as military governor of Hawaii.

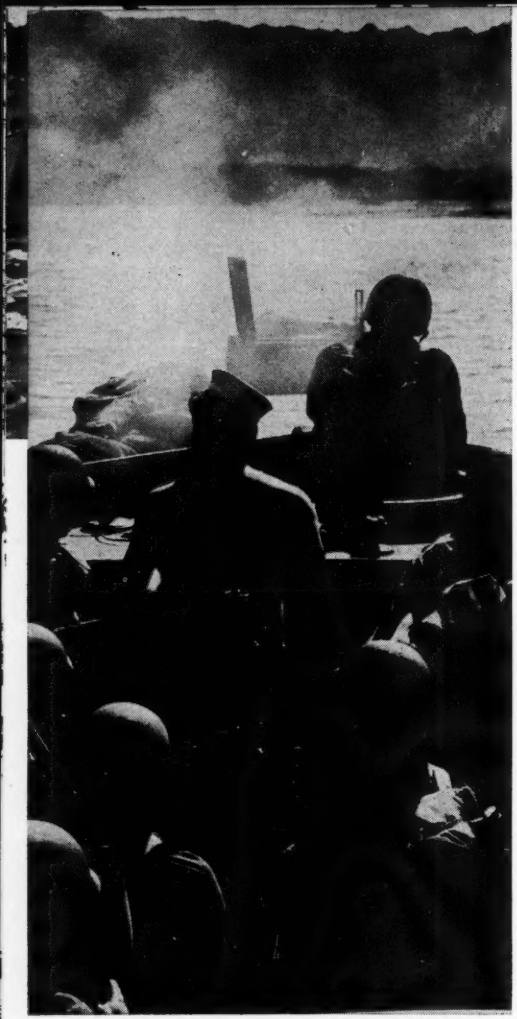
The War Department rushed reinforcements from the Pacific coast as fast as it could, especially for the depleted Army air forces, and by mid-January 1942 Oahu was well secured against invasion. To insure unanimity in the direction of military operations, the Army placed its forces under Navy command for the duration of the war. By spring the Army had enough strength in Hawaii to put sizable garrisons on the other major islands, and by June, when the Japanese again approached, the Army garrison numbered more than 100,000 officers and enlisted men.

Immediately after the Pearl Harbor attack there had been a host of rumors and reports of sabotage and other subversive activity by Japanese residents, but all of them proved groundless. Nevertheless, the Army interned a good many individual Japanese and removed Japanese soldiers from units in Hawaii and sent them to the mainland. The first group of them became the 100th Infantry Battalion that acquired a magnificent combat record in Italy and in France.

Altogether, some 40,000 Hawaiians served in the armed forces during World War II, most of them in the Army. Half of them were of Japanese descent, and this contingent provided the great bulk of the more than 3,000 islanders who were killed or seriously wounded.

**Heavy guns from 55th Coast Artillery at Fort Kamehameha took part in a special review staged for President Franklin D. Roosevelt when he visited Islands in 1934.**





After attack on Pearl Harbor, War Department rushed reinforcements from mainland to garrison the Islands and train for future amphibious assaults on enemy-held areas.

This was but one aspect of the tremendous contribution made by Hawaii and the Hawaiians to the winning of the war, a record that went a long way toward assuring what has now been accomplished—the admission of Hawaii as the fiftieth of the United States.

### Contributions to Victory

JAPAN'S defeat in the naval battle of Midway in early June 1942 was the turning point in the Pacific war, and for Hawaii it meant an end to the threat of Japanese invasion. But the volume of military activity in the islands continued to increase, for they were the principal position for directing and launching the many operations that finally crushed Japan.

The islands provided a staging area for distant attacks, and a spacious training ground for invasion landings, jungle combat, soldier survival, and gunnery.

In addition Hawaii was an immensely valuable distribution center for supplies, and a rest and recreation area for all the Armed Forces during the long Pacific war. Twelve Army divisions trained for Pacific fighting in Hawaii, and more than a million members of

Members of famed 27th Infantry Regiment (Wolfhounds) receive traditional welcome as they dock at Honolulu Army Port after returning in 1954 from Korea.

the Armed Forces passed through Oahu before the war was over. From the summer of 1943 onward, the Army's old Hawaiian Department headquarters was submerged in new commands that reflected the much larger role that Hawaii was then playing in the war, although it was not formally discontinued until 1947.

### Strategic Importance

THE outcome and the technical innovations of World War II naturally had a very large impact on the situation of the U. S. Army in Hawaii. For the time being, the military threat to the islands and to the Pacific coast had been removed, and the coast artillery guns that had been so important to the defense of Oahu were about to disappear. Yet, far from abandoning its island bastion, the United States was to turn to it again in 1957 when Headquarters, Pacific Command—comprising the U. S. Pacific Fleet, U. S. Pacific Air Force, and U. S. Army Pacific—was established in Hawaii as the major military base for operations in the Pacific.

***Giving purposeful direction to a vast and varied Reserve training program in the New York-New Jersey area is the role of***

# II U. S. Army

**Major General**
**Raymond W. Curtis**

# Corps--

## Where Reservists Prepare for M-Day Missions

CAMP KILMER, located just outside New Brunswick, New Jersey, is perhaps best known as the center where, between 1942 and 1945, some five million troops were processed enroute to or returning from overseas duty. Today that same installation—now designated an inactive post—houses Headquarters, II U.S. Army Corps. As such, it is undoubtedly the most active "inactive" post in the Nation.

For II Corps is numerically one of the largest U.S. Army Corps in the country, comprising an area where roughly one-eighth of the Nation's populace lives and works. The Corps is the heart of a vast and diversified operation in the Army Reserve Program. In structure and function, it is representative of the fourteen Army Corps, which are assigned responsibilities for the Army Reserve and ROTC within continental United States.

Fundamentally, the mission of the Army Reserve is to establish and maintain a strong and ready force that can be rapidly mobilized and expanded when and if war should come. The aim of II Corps is to have a force of dedicated, well-trained "civilian soldiers" who are capable of fulfilling their responsibility on a moment's notice.

In civilian life these Reservists follow a range of pursuits that reflect a cross-section of community life. One night a week they don their uniforms for training, and supplement this by week-end exercises and two weeks of annual active duty for training. In effect, they constitute a force of well-trained 20th Century Minutemen—citizen-soldiers whose heritage goes back to Revolutionary War days.

### Organization

CREATED in 1958 by merger of the Military Districts of New York and New Jersey, II U.S. Army

Corps now supervises the training, supply and administration of an Army Reserve population of 32,871 officers and 258,226 enlisted members organized into 614 units. Its Ready Reserve strength is 21,505 officers and 104,114 enlisted men. Of these, 5,522 officers and 34,439 enlisted men are assigned to Troop Program units; all others are members of either Non-Troop Program units, Ready Reserve, Standby or Retired Control Groups.

The Corps also provides direction and supervision to approximately 16,000 students enrolled in Reserve Officers Training Corps (ROTC) programs in New York and New Jersey.

With the establishment of II Corps, a direct line of authority was created from Department of the Army through Continental Army Command, First U.S. Army to II Corps. The Commanding General, II U.S. Army Corps has direct command of ROTC Instructor Groups and U.S. Army Reserve Advisors in the two-state area. Also under his direct command are geographical Sector Commands, which direct the Reserve program through Sub-Sector Commands; and nine major commands, each with its own subordinate units.

### ROTC Activities

REFLECTING the importance of ROTC affairs, an office of Deputy Corps Commander for ROTC Affairs was established in II Corps in October 1959.

Currently II Corps ROTC activities extend to twenty senior ROTC units in colleges and universities, four military schools, one junior ROTC school and seven National Defense Cadet Corps units.

Purpose of the senior ROTC program is to procure and train college students so that they may qualify upon graduation as commissioned officers in the U.S. Army. A typical ROTC unit at one university has an enrollment of approximately 800 students, supervised by a lieutenant colonel of the Active Army with the status of Professor of Military Science and Tactics.

The Military Science course taught by the ROTC instructor staff includes such subjects as American Military History, marksmanship, drill, map reading, small-unit tactics, troop movement, communications and leadership. In addition certain colleges offer branch material programs which include practical work with the major items of equipment authorized

**MAJ. GEN. RAYMOND W. CURTIS**
**Commanding General, II U.S. Army Corps**
**Camp Kilmer, New Jersey**

At dedication of ROTC building at New Jersey college are Army Vice Chief of Staff, Gen. Decker; Cardinal Spellman; college president Father Shanahan; and the author.

that branch. Also available is a flight training course for qualified seniors preparing for entry into the Army Aviation program.

The ROTC program includes frequent inspections, a Fall review, an annual field day and a ceremony for award of Regular Army commissions to outstanding cadets.

Besides providing invaluable leadership experience for civilian as well as military pursuits, ROTC training fosters team spirit that is most important in athletic participation and campus life. In one university 84 percent of all campus leadership positions competitively available to male students are filled by ROTC cadets.

### Sector Commands

UNDER the Commanding General, II U.S. Army Corps are three sectors—Northern New York, Southern New York, and New Jersey—each of which directs the operations of Army Reserve activities within its area. Sector Commanders, through Sub-Sector Commands, supervise the activities of U.S. Army Reserve Centers, including preparation of USAR units for the two-week annual active duty for training period.

Center facilities are leased or donated, government-owned or constructed. Those built according to standard plans and specifications vary in size from one-unit modified (100 man) to five-unit (1000 man). With a few exceptions, such Centers include classrooms, administrative space, unit storage space, locker rooms, showers, rifle ranges, kitchen, day room, assembly hall, maintenance shop, parking area.*

### USAR Centers

RESERVE centers have staffs of five to thirty-five officers and noncommissioned officers who advise and assist units with their training, both at the center and in the field.

*Northern New York Sector has twenty-five leased or donated facilities, five government-owned and eighteen constructed centers. Two centers are under construction.

Southern New York Sector includes twenty-one leased or donated facilities, fourteen government-owned and six constructed centers.

New Jersey Sector has six leased or donated facilities, seven government-owned, five constructed centers, and one under construction.

## II U. S. Army Corps

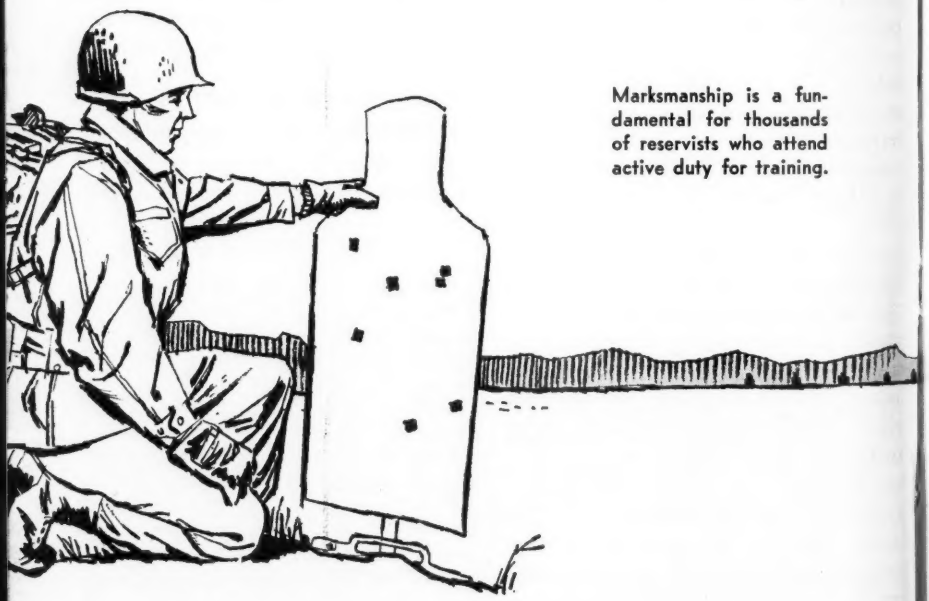
As an example of complex function, the SFC Nelson V. Brittin USAR Center, Camden, New Jersey, administers a Reserve program that encompasses both rural and urban sections. Within its area are more than 1100 farms and 600 industries whose products range from fountain pens to atomic submarines. Approximately 1000 Reservists employed in farming, shipbuilding, manufacturing, teaching and civil service use its facilities.

Through reserve duty training assemblies and annual active duty for training, the units of this center —as all in II Corps—are concentrating on training programs which will permit units to initiate appropriate basic or advanced unit training after mobilization. At the same time these units are developing administrative self-sufficiency for peacetime operations. Key personnel, in addition to their regular responsibilities, attend Army Service Schools and participate in Army Extension Courses and other military education programs.

### Major USAR Commands

BESIDES its three Sectors, II Corps encompasses nine major or General Officer USAR Commands. While the programs of these Commands generally parallel those of other units within the sector commands, their scope and size are far greater. For example, the 77th Infantry Division, with headquarters in New York City, is one of the ten Army Reserve combat divisions in the country. Its 10,000-man membership is drawn from an area extending from Poughkeepsie in the north to Staten Island in the south and Hempstead, Long Island, to the east.

The necessities of medical training and supervision give the 818th Hospital Center, New York City, a structure distinct from the other



Marksmanship is a fundamental for thousands of reservists who attend active duty for training.

major commands in the II Corps. In direct command of all 34 non-divisional medical units within the two states, the Hospital Center supervises the activities of 4,224 Reservists. Units receive training at Reserve Centers in their communities, but their training programs, based on II Corps directives, are developed and directed by the 818th Hospital Center. The Hospital Center also conducts periodic inspections of hospital units at Reserve Centers and active duty training sites.

As an example of the realistic training received, the 364th Army General Hospital, Albany, New York, cared for the sick and injured accrued from more than 17,000 National Guard, Army Reserve and Regular Army personnel present during the unit's two-week annual active duty for training at Camp Drum last summer.

The 818th Hospital Center is developing a specialized training program to broaden the medical experience of its personnel. Dentists will be given instruction in first aid, resuscitation, anesthesia and minor surgery, and nurses will receive training in treatment of mass casualties and in assisting medical and surgical teams. One major objective is to train all enlisted personnel in basic medical subjects, regardless of duty assignments.

A unit unique in the major commands and the Reserve troop lists of the U.S. Army is the 410th Engineer Command (Amphibious Support), with headquarters in New York City and with organic elements located from Long Island to upper New York. Its mission is to perform combat and combat-support operations in offensive and

Learning how to handle rifle is part of ROTC training. Here Captain Arthur J. Elian instructs group of Rutgers University students.

During annual active duty for training, reservists board troop-carrying helicopter above. Group performs amphibious operation below.

defensive actions on beaches and along shorelines. With amphibious training facilities at Dobbs Ferry, New York, and Camp Drum, New York, this unit currently is preparing for a combined operation with the U.S. Navy in August.

### Community Relations

SINCE Army Reservists take part in all phases of community life, it is natural that community relations form a vital part of the program of II U.S. Army Corps.

Civic organizations throughout New York and New Jersey regularly meet at Reserve installations when the Centers are not being used for Reserve activities. Boy Scouts meet at Reserve drill halls, and community gun clubs engage in firing practice at Reserve indoor ranges. Reserve units frequently provide speakers at civic functions, take part in local parades, and give demonstrations before Youth Clubs, Parent-Teacher Associations and other community groups.

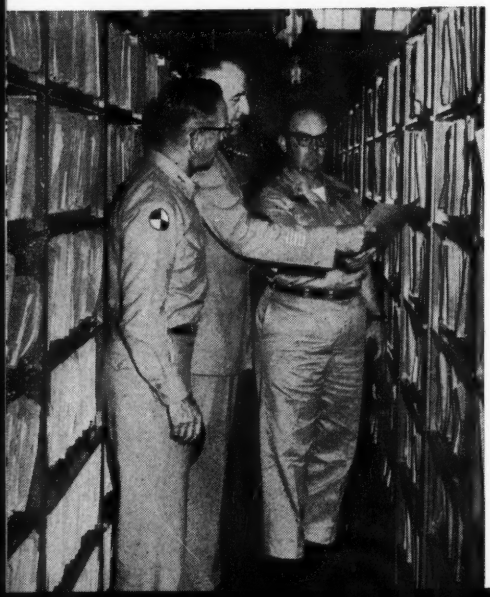
In addition, Reservists participate in fund-raising drives and blood donations. The 310th Field Hospital in Poughkeepsie has given demonstrations of first aid survival techniques, and the unit advisor of the 464th Engineer Unit in Schenectady has instructed the New York State Police in the use of mine detector equipment.

Staff members of various Reserve units and centers often hold public-service positions in the community. The Commander of the Southern New York Sector, for example, is Honorary Chairman of the New York City Cancer Committee of the American Cancer Society; the Commander of the James W. Wadsworth USAR Center, Rochester, New York, is a member of the National Defense Committee of the Rochester Chamber of Commerce.

Some centers sponsor annual community projects. The First Lieutenant James McConnell USAR Center, Syracuse, New York, sponsors an orphanage Christmas party each year and sends orphans to camp during the summer. The Elihu Root USAR Center, Utica, New York, adopts two needy families each Christmas season and provides them with food, clothing, and toys.

As the home of II U.S. Army Corps, Camp Kilmer is vitally concerned with community relations. Each summer its doors are thrown open to children in Operation Youth. Last summer 10,000 children, sponsored by approved organizations, enjoyed outdoor activities and recreational facilities at

Maintaining records for thousands of Reserve troops administered by II Corps is task of Reserve Personnel Administration Section.



Aim of Corps is to have force of dedicated civilian soldiers who can fulfill responsibilities at a moment's notice.

Camp Kilmer, and even more are expected this year.

### Financing II Corps

IN TERMS of dollars, II Corps is "big business." With an annual operating budget of approximately $11,250,000, II Corps pays $2,100,000 a year in salaries to its 480 civilian employees. Annual costs for leased space and maintenance of constructed facilities total another $1,200,000. An additional $7,427,893 are allocated for annual active duty for training pay of Army Reservists in New York and New Jersey. These funds find their way into almost every civilian community throughout the two states.

As an example, the James W. Wadsworth Center, Rochester, New York, and its Sub-Centers, are used by 28 Reserve units comprising approximately 2000 Reservists. It has a staff of six officers, ten sergeant advisors and sixteen civilians. Initial cost of the center itself was $576,700, and annual maintenance runs approximately $23,000. Clothing and equipment issued to units and individuals at the Wadsworth Center and its Sub-Centers totals $828,000. The annual payroll for Reservists, Active Army and civilian personnel approximates $708,000.

The dedicated spirit and readiness of II Corps Reserve units has earned the respect of local communities—a feeling that is reflected in articles, editorials and statements appearing in newspapers and magazines throughout the area.

### The Public and the Reserve

THE United States Army is a reflection of the entire nation which it serves and from which it springs. As Secretary of the Army Wilber M. Brucker has emphasized, the Active Army, the Army National Guard and the Army Reserve are elements of a dynamic One Army team, each member an indispensable link in our national defense structure.

In II U.S. Army Corps and elsewhere throughout the Nation, Reservists, with their individual skills and collective unity, form a most important part of America's visible deterrent strength. Drawn from every community, these 20th Century Minutemen are dedicated to the establishment of a firm, enduring world peace—a peace based on honor, freedom, justice, and the dignity of man, and safeguarded by unceasing vigilance.

*A century of Army signals—*

# From Flying to Talking

# g torch
# g satellite

A DUST-BEGRIMED soldier wigwagging a warning that the Navahos were on the warpath in the trackless desert of the Southwest—

A message of Christmas goodwill from the President of the United States to the entire world, flashing from a communications satellite circling in the trackless reaches of outer space—

One century separates these two milestones in the progress of communications—a century marked by continuous achievements and service to the Army and the Nation by the U. S. Army Signal Corps.

It is a century of invention and progress that would today astonish the founder of the Corps. Yet while Major Albert Myer, appointed first Signal Officer in the spring of 1860, might well be astounded, it was his far-sighted policies that laid the solid foundation for much of this progress, and for the still more remarkable advances now being evolved by the Signal Corps.

Signalling as such was not exactly new to military forces in Major Myer's day. The hordes of Genghis Khan communicated tactical orders by signals, Napoleon flashed messages from semaphore towers across Europe. Ships had long used signal flags. But the formal organization of a military unit whose function was to set up communications methods and to maintain them was unique. The U. S. Army was first to adopt such an organization. It shortly was to prove its worth in the Civil War, and since then it has been in the forefront of both military and civilian communications advances.

Major Myer was an Army surgeon who, like Alexander Graham Bell, had taken a great interest in the deaf which led him to study sign language. Shortly after he was appointed Signal Officer, he set out for the Navaho campaigns, taking along his signalling equipment, consisting of flag and torch kits. At that time he and his assistants

employed, not the double flags that comprise the insignia of the Corps, but a single flag which was waved from one side to the other to send messages. The "flying torches" were used at night.

His original small group of signalmen soon was to be expanded to fill the needs of the Civil War, and so invaluable were their services that in March 1863 the U. S. Army Signal Corps was formally established. It served originally both as a combat arm and a technical service—a dual role continued to this day. The original orange color of the historic Army Dragoons, who later became the "yellow-leg" Cavalry, was adopted as the branch color of the new Corps.

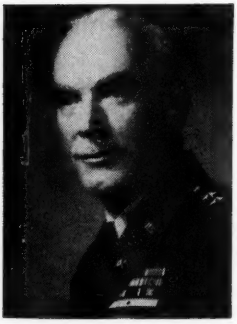
Major Myer's signalmen continued to employ the wigwag flag by day and torches by night, watching and reading through telescopes between companion stations. In this way messages could be relayed swiftly and efficiently. However, since fog or smoke cut down visual efficiency, Major Myer had ideas of putting the electric telegraph into the field service of the Army. Civilian telegraphers, directly controlled by the Secretary of War and paid by the Quartermaster, were already operating the U. S. Military Telegraph, which provided command and administrative communications between major headquarters.

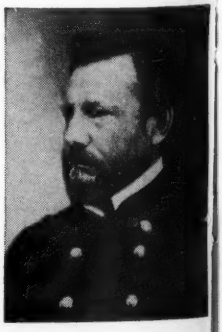
### Electric Telegraph

BELIEVING that it would be practical to provide tactical electric telegraph, which could be moved about in the field, Major Myer worked with George Beardslee, a civilian inventor, to develop the Beardslee magneto-electric telegraph set. This could be hand-operated without batteries, was light enough to be portable, could signal over several miles of field wire laid over the ground or strung on lance poles—and above all could be operated by practically any soldier after brief training.

Called the "Flying Telegraph," the new system was in operation in time to play a part in the Peninsular Campaign and at Fredericksburg in 1862, where fog and smoke prevented good reception of visual signals. The magneto-electric telegraph had certain limitations, how-

**A century of progress separates Maj. Gen. R. T. Nelson, left, Chief Signal Officer of the Army, from Major Albert Myer, who founded Signal Corps.**





ever. It could not send messages as far as the heavier battery-operated commercial sets. Soldiers frequently cut the wires, and insulation deteriorated. At the battle of Chancellorsville, General Hooker turned the operation over to civilian telegraphers whose storage batteries worked the lines more effectively with Morse keys and sounders.

At Chancellorsville, Myer, by now a colonel, claimed that because he was not informed of battle plans, he could not set up his stations effectively. But at Gettysburg in July 1863 General Meade included the Signal Corps in his war councils and visual communications were excellent during the battle. Demonstrating also that they were combat troops, it was a small signal detachment atop Little Round Top that delayed the Confederates long enough to insure holding this strategic point for Union troops—an event that affected the battle.

In 1863, however, Secretary of War Stanton ordered Major Myer to turn all electric telegraph operations over to the Military Telegraph organization. During this disagreement, Colonel Myer was temporarily removed to the Department of the Mississippi. A year later, the acting Chief Signal Officer, Lt. Col. W. J. L. Nicodemus, was replaced by Colonel B. F. Fisher.

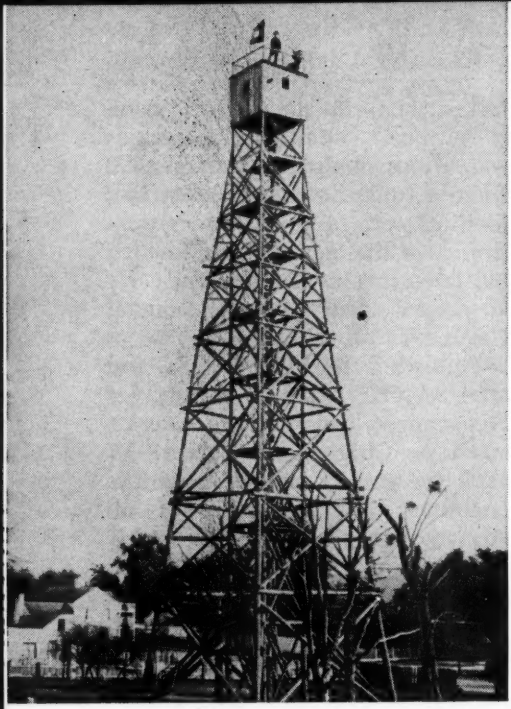
During the Civil War captive military balloons, a logical uplifting of elevated observation and signal platforms, were not an Army Signal Corps assignment. In mid-1863 the Army had offered its rather uncertain balloon activity to the Signal Corps but Colonel Myer refused it on the grounds that he lacked men and money to operate it properly. Balloon operations were dropped altogether until 1892 when aeronautics and military ballooning were resumed as a responsibility of the Signal Corps—which led later to establishment of early airplane activity under the Signal Corps.

Following the Civil War and after Secretary Stanton left the War Department, Colonel Myer was restored as Chief Signal Officer. By 1867 he gained control over the command and operation of all Army telegraph lines; increasingly longer wire lines were built and maintained and at the same time the mobile "Flying Telegraph Trains" were provided to each Army Corps. More permanent lines continued to be built as the Nation pushed deeper into western territories. By 1880 the Army operated some 5,000 miles of lines.

### Weather Observation

LARGELY because the Signal Corps had available a widespread organization of telegraphers, the Corps was called on to operate the new national weather service authorized by Congress in 1870. Soon hundreds of reporting stations from the Atlantic to the Pacific and also in some areas of Canada and the Caribbean were operating. Exchange of weather data with foreign nations marked the beginning of international cooperation in large-scale scientific efforts.

Some 20 years later, however, when Congress decided that the weather service was primarily a civilian matter and assigned it to the Department of Agriculture, it nearly sounded the death knell of the Army Signal Corps. In fact, a



From signal towers, as this one at Jacksonville, Florida, Civil War Signal Corps crews sent messages, read replies through telescope.

whole decade of effort to disband the Corps set in, and only through the heroic efforts of Brigadier General A. W. Greely was the Corps kept together.

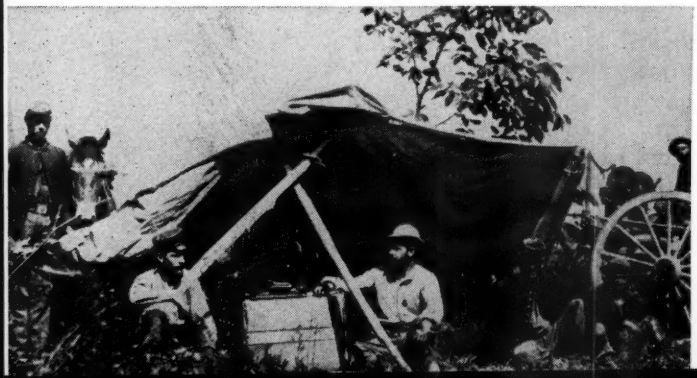
### Polar Studies

GENERAL Greely had gained wide fame when in 1881 as a lieutenant he had led a 25-man team to Ellesmere Island, opposite northern Greenland. The expedition was part of the Signal Corps participation, under Brigadier General William B. Hazen (who succeeded General Myer in 1880) in the First Polar Year. This effort to learn more about the Arctic marked the beginning of International Geophysical Year research. (See "Pioneering in IGY Research," March 1960 DIGEST.)

In 1881, Gen. Hazen sent out two Polar Year expeditions—one to Point Barrow, Alaska, the other to Lady Franklin Bay on Ellesmere Island. The ten men of the Point Barrow expedition returned safely in 1883 with a complete set of scientific observations, but Greely's band was marooned.

The 25 men of the Ellesmere Island team under Lt. Greely likewise maintained records of weather and polar phenomena. A party under Lieutenant J. B. Lockwood in 1882 reached the point farthest north attained by white men to that date. But the southward return of Greely's group met tragedy. Navy ships scheduled to pick up the expedition were blocked by ice packs in the Greenland channel for two successive summers.

When in 1884 a rescue ship got through, only seven men remained alive, and one of them died on the way out. All the scientific records



Field telegraph proved value during Civil War, with Signal Corps pioneering in development of portable equipment.

were saved, however, including many remarkable photographs. The expedition captured the imagination of the American public, and led to greatly increased interest in Arctic exploration.

Upon the death of Gen. Hazen in 1887, Greely, then a captain, was promoted to brigadier general and named Chief Signal Officer. In 1892 he won War Department consent for assignment of military balloons to the Signal Corps. He also promoted military uses of photography, and when the Spanish-American War came in 1898 the Signal Corps provided intensive coverage. The Corps also maintained one balloon which saw duty during the famed assault on San Juan Hill.

By this time the Signal Corps was also providing telephone as well as telegraph lines and both were widely used in Cuba, Puerto Rico and the Philippines. The old wig-wag flags still proved their usefulness in coordinating the fire of Navy warships in Manila Bay. Following the war, undersea cable also was laid to connect the principal islands.

Soon General Greely was moving his center of attention from the torrid tropics to the frigid reaches of the Arctic. In 1900 Congress assigned to the Signal Corps responsibility for communications to and in the Alaska Territory. (See "Lifeline to the North," November 1954 DIGEST.) Cable and wire lines served both military garrisons and civilian needs of miners and fishermen as well.

### Radio and Aircraft

THE new radio—then called wireless telegraphy—was also put

**To improve line of sight, early signalmen built platforms from which to send messages, using flag by day, torch by night.**

to good use. One of the first military circuits employing this new technology was a 100-mile link from Norton Sound to Nome, spanning an area that would have presented extreme difficulties for land line or underwater cable communications. The Signal Corps still administers the Alaska Communication System, supplying the needs of the 49th State.

An interesting sidelight to the Alaskan operations of the Signal Corps is the fact that a young lieutenant, later to become the famed "Billy" Mitchell of the Air Corps, served there as a Signal Corps officer in 1901.

General Greely retired in 1906 after some 19 years as Chief Signal Officer. It fell to his successor, Brigadier General James Allen, to introduce the airplane to the Army.

Success of the Wright airplane in 1903 led to the formation of an

Aeronautical Division in the Signal Corps in 1907. A contract was made with the Wright Brothers for an airplane to meet Army specifications. That plane made its initial flight at Fort Myer, Virginia, on 3 September. A few days later the plane crashed, injuring Orville Wright and killing First Lieutenant Thomas E. Selfridge, a Field Artillery officer on duty with the Signal Corps for aviation training —the first man to die in the flight of a heavier-than-air powered aircraft. In 1909 the Wrights delivered a plane to Army specifications.

Four years later Brigadier General G. P. Scriven, General Allen's successor, inherited a steadily expanding variety of Army Signal Corps activities, including field and aircraft radios, increasingly elaborate long-range wire, cable and radio circuits, and fire control systems for directing the fire of large guns on targets visible only to remote observers.

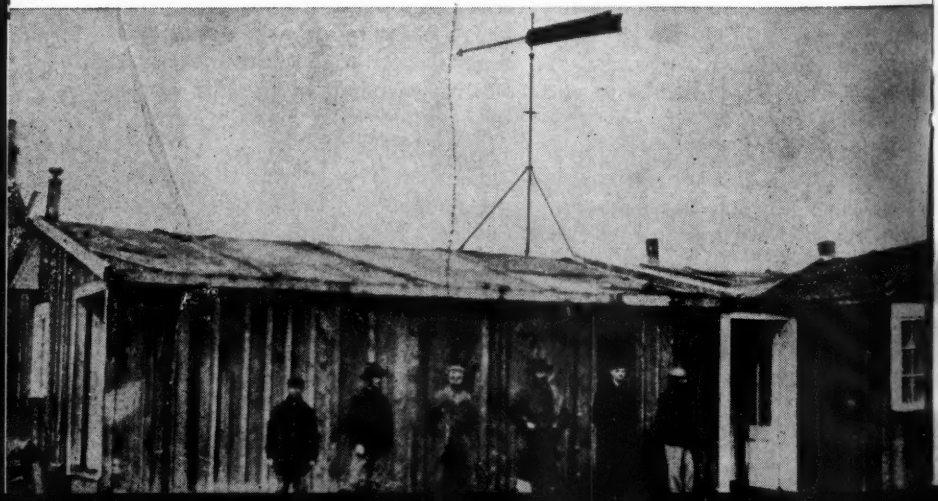
## World War I

ON THE eve of United States entry to World War I in 1917, Brigadier General G. O. Squier became Chief Signal Officer. Under the spur of war, the Corps was built from a strength of less than 2,000 to more than 50,000 by the end of 1918. To train this rapidly expanding organization, a nucleus of signal schools and laboratories was set up at Camp Alfred Vail, now Fort Monmouth, New Jersey —still the home of the Corps' extensive education system. Earlier signal schools had been located at Fort Leavenworth and Fort Myer.

In France the outpost companies of field signal battalions provided telephone, telegraph and radio service down to the front lines, while signal telegraph battalions built lines across the country.

U. S. Army aircraft continued as a Corps responsibility until the War Department took aviation out of the Signal Corps in May 1918, setting it up as the Air Service, which later became the Army Air Corps, then the Army Air Forces, and finally the U. S. Air Force. It is interesting to note that earlier, during the Mexican Border expedition in 1916, the small group of

**Polar Year expedition to Point Barrow, Alaska, in 1881 produced much scientific information and led to increased public interest in Arctic exploration.**

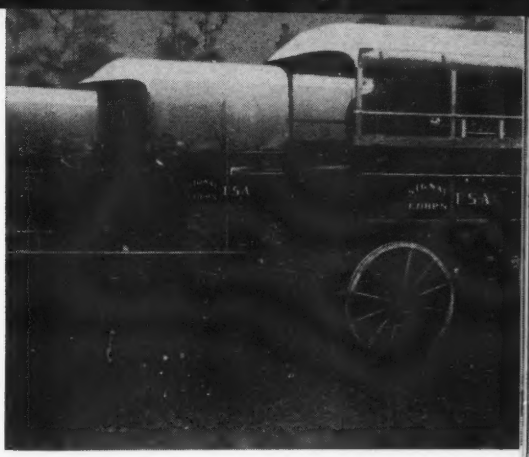


Signal Corps aviators had gained experience that stood the entire Army in good stead when expansion occurred in World War I.

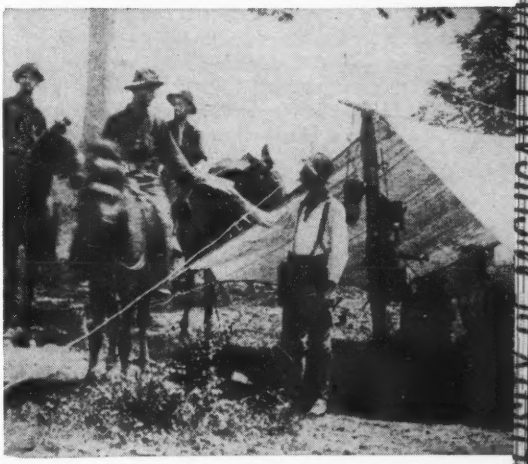
To head up Army Signal Corps research and development activity, Squier induced the world-renowned physicist, Dr. Robert A. Millikan, to come from the University of Chicago to direct the wartime activity. Many new kinds of equipment, including vacuum tube radios, were designed and produced by industry.

In Paris the Signal Corps maintained a laboratory in which worked such scientists as Major Edwin H. Armstrong, who developed the superheterodyne circuit during this period, and later invented frequency modulated radio. Another scientist-officer whom General Squier brought into the Corps was Major William R. Blair, who was placed in charge of the meteorological activity maintained to support fire control and aviation. Both men were later to advance the science of communications.

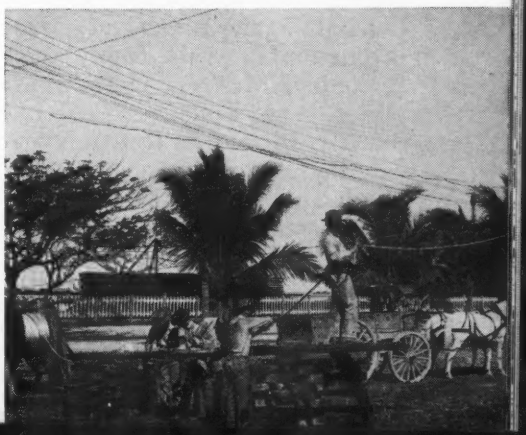
Photography became increasingly important during World War I. Motion pictures of action in France still are studied in military schools. The Signal Corps also introduced training films which helped train quickly large numbers of recruits—an activity that has proved valuable ever since.



Mule-hauled battery wagons for field telegraph trains helped Signal Corps provide coverage in Spanish-American War, 1898.

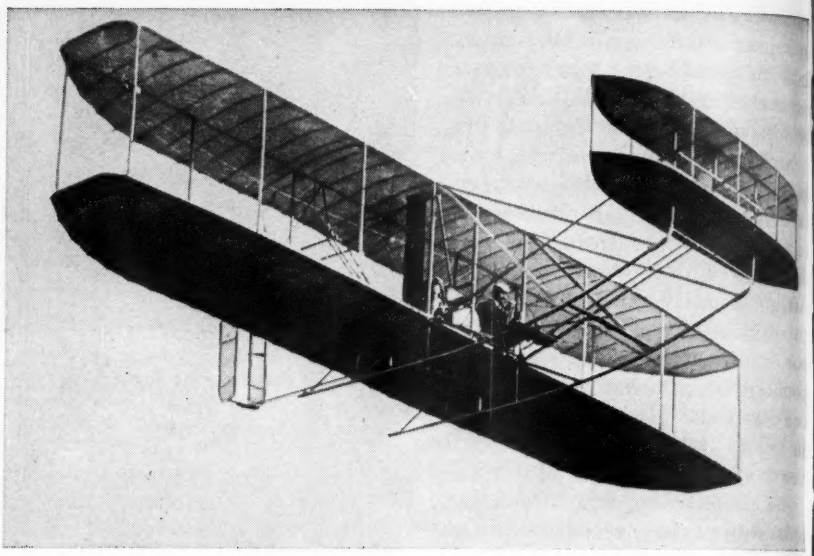


Field telephone station set up near San Juan Hill, above, contrasts with permanent cable installed, below, in Manila area by 1902.



## Peacetime Pioneering

DESPITE the inevitable reduction in men and funds that followed World War I, a succession of Chief Signal Officers maintained a skeletal Signal Corps for a decade. Far from stagnating, the Corps managed to promote new developments in wire and radio, bringing



Orville Wright flies plane at Fort Myer, 1909—the first to meet Army specifications for a heavier-than-air powered-craft for Signal Corps Aeronautical Division.

out a steadily improving series of ground and airborne radios. It improved the War Department Radio Net and Army communication links in Continental United States and to Hawaii and Panama. Promoting Signal advances were Major Generals C. M. Saltzman, G. S. Gibbs, I. J. Carr, J. B. Allison and J. O. Mauborgne.

General Mauborgne especially was a research-minded chief, who built on the foundations laid by General Squier. General Mauborgne supported the highly secret beginnings of Army radar which Major—now Colonel—Blair initiated as Director of the Army Signal Corps Laboratories at Fort Monmouth as early as 1930. Today Colonel Blair, now retired, holds the fundamental and basic patent for American radar.

From Signal Corps pioneering activities in this field have evolved the many radars used by the military, as well as those employed in numerous civilian applications such as traffic control, navigation, storm tracking, and air lines flight direction and control.

### World War II Record

AGAIN in the thick of another World War, the Signal Corps expanded rapidly. Major General D. Olmstead had succeeded General Mauborgne just a few months earlier, and to him fell the task which overshadowed even the Corps growth during World War I.

Not only was the expansion difficult simply in terms of training additional manpower—the Corps increased from 27,000 to 350,000 by the end of the war—but there was also enormous growth in

research and development activity, in supply and training of men in applications of new electronic devices and weapons previously unheard of.

New devices included complex radios in every tank and command car, mobile long-range radio, radio relay, carrier communications, radioteletype in the new world-wide Army Command and Administrative Net, and radar. Radar alone, both for ground troops and the expanding Army Air Corps, soon equaled the variety of other items in the many forms in which this new technique developed.

As in World War I and the Spanish-American War, the Signal Corps also was called on to provide photography and motion picture coverage. Undoubtedly no war in history has ever been so thoroughly pictorialized, and many a Signal Corps cameraman lost his life to make this possible.

Schooling tasks mushroomed during the war to include Camp Murphy in Florida and Camp Kohler in California. Later these facilities were eliminated, leaving the basic schools at Fort Monmouth. The several laboratories that had spread out in the Monmouth area during the war, began to be consolidated by 1954 in one huge hexagonal building—the existing U. S. Army Signal Research and Development Laboratory.

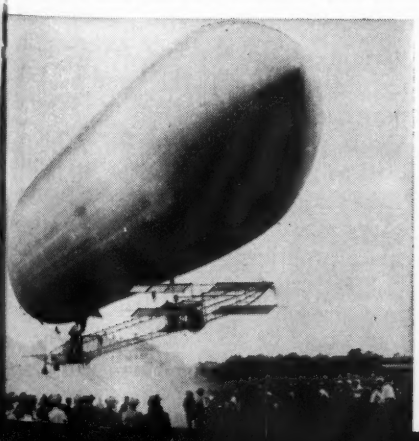
Under Major General H. C. Ingles, Chief Signal Officer from 1943 to 1947, the Corps emerged from World War II much larger and with far wider activities and responsibilities than ever before—despite loss to the Air Corps of electronics responsibility for aviation in 1944 and of all radio intelligence activity in 1945. These losses momentarily cut away from the Signal Corps nearly half its men and activity. But new missions were in store.

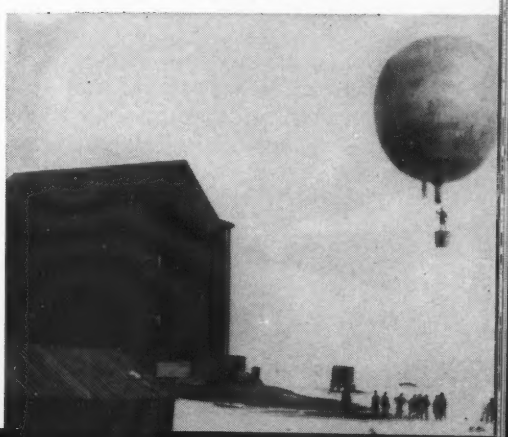
After World War II, personnel declined to a low of about 50,000 in early 1950. Meanwhile, however, activities and responsibilities continued to increase.

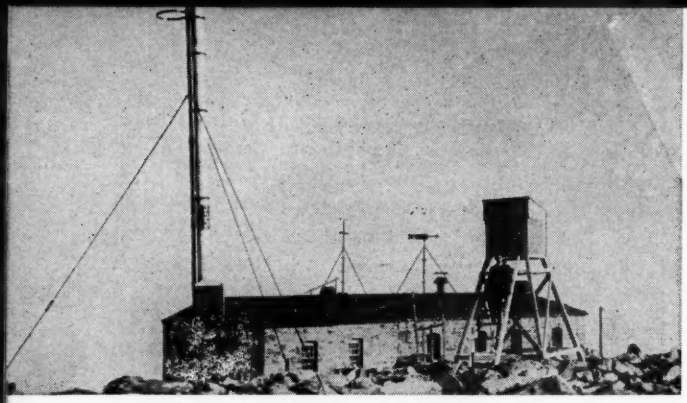
## Research Advances

A SIGNIFICANT milestone in research and development came in 1946 when first contact with the moon was accomplished by Army

**Before airplanes came into military use, Aeronautical Division worked with dirigibles, also maintained observation balloons which became Signal Corps responsibility in 1892.**







Typical of reporting stations set up when Weather Bureau was established in 1870 was this one on Pike's Peak.

radar at the Signal Corps Radar Laboratory, Camp Evans, Belmar, New Jersey. This contact proved the feasibility and marked the beginnings of space communications in which the Corps continued to pioneer. Highlight of this work so far was the Army-developed Signal Communications Relay Equipment — SCORE — which radioed President Eisenhower's Christmas message to the world from outer space in 1958.

Under Major General S. B. Akin, Chief Signal Officer from 1947 to 1951, the special skills and technologies of the Corps were maintained. The Army Command and Administrative Network improved its services; radio-relay techniques were improved, and equipment was more widely used.

When the Korean crisis developed, it was radio-relay teams on occupation duty in Japan that were called on to support a conflict in a new war and new setting. The first Army troops and the first casualties in June 1950 included Signal Corps troops flown in from Japan.

### The Corps in Korea

THE Korean War placed new requirements on the Corps. These included renewed use of Army aircraft, new and better ground radar, new schools to supplement the Army Signal School at Fort Monmouth. One was set up at San Luis Obispo, California, and another at Camp Gordon, Georgia. The latter continues today as the U. S. Army Signal Training Center, which includes the Southeastern Signal School. As usual, the Corps provided photographic and other support during the Korean War. The Corps underwent another wartime expansion under Major General G. I. Back, 1951-55.

The years since the Korean War have seen a tremendous rise in communications-electronics. Increased importance of the work of the Corps was underscored when Lieutenant General J. D. O'Connell, 1955-1959, became first Chief Signal Officer to receive that rank.

### Missile and Space Era

ELECTRONIC support for guided missiles began in 1949, and soon grew into the U. S. Army Signal Missile Support Agency. Experience gained early at White Sands Missile Range, New Mexico, was to permit the Corps to provide major science and electronics support to subsequent missile and space programs.

Electronic warfare and countermeasure efforts began modestly at

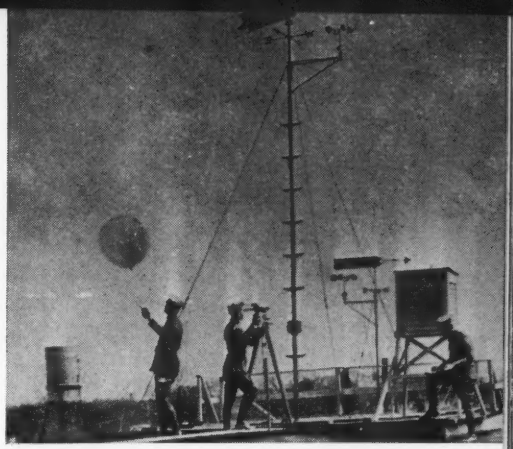
Fort Monmouth in 1950, then expanded by 1954 into the U. S. Army Electronic Proving Ground, Fort Huachuca, Arizona. Here important test and evaluation work is carried out on newly developed systems and equipment under simulated and actual field conditions. (See "Better Command Control," June 1959 DIGEST.)

Phenomenal growth, accelerated by the missile and space era, has marked other major Signal Corps efforts. Missile Master, an electronic control and coordination system for use with Nike and Hawk missile batteries, was developed in cooperation with industry, and the first operational system was put into action at Fort Meade, Maryland, in December 1957. Additional systems now are being installed at key complexes in the United States.

Rapid development of Army missilery brought about the need for combat surveillance and target acquisition that would permit gathering information day and night, in all weather, about the enemy. As a result, the U. S. Army Combat Surveillance Agency was established to provide direction for this major systems area. (See "Combat Surveillance Looks to the Future," March 1960 DIGEST.)

Among new equipments produced in this field were the first-generation pilotless surveillance drones; the man-packed Telescout television system; mobile and portable surveillance radars; sensors such as airborne radars, infra-red and photographic cameras. Development continues toward constantly improved systems.

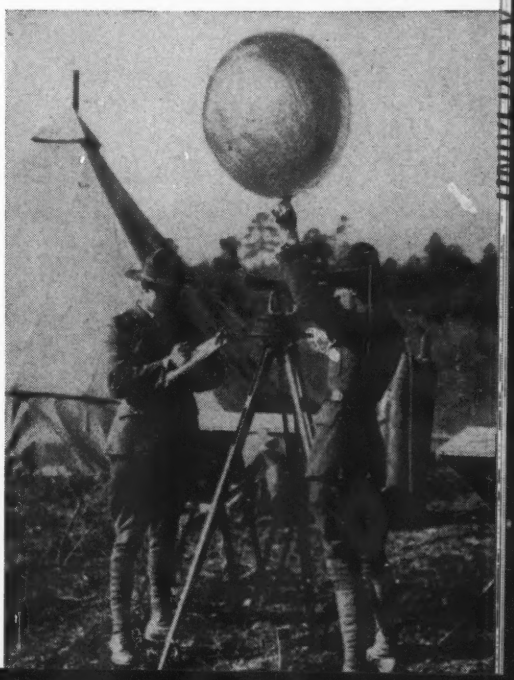
Significant advances were made in avionics, involving electronic



After Weather Bureau was turned over to civilian agency, Corps still supplied military data, pioneered with balloons to measure wind.

devices and communication for Army aircraft. Besides communications sets, a mobile control tower was developed. At present the Corps is developing, in a joint program with the Navy, an instrumented flight system for helicopters

When World War I came, valuable weather services were performed for American forces, as this unit is doing at Colombey-les-belles.



Motion pictures made during World War I are still studied in military schools. The Corps also provided telephone, telegraph and radio services down to front lines.

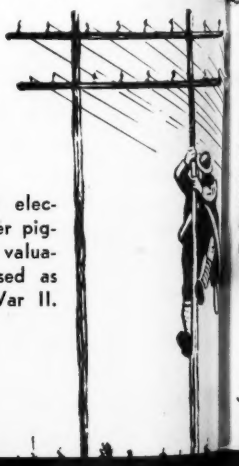
and fixed-wing aircraft that will present real pictures to the pilot. Also under development are navigational systems using visual maps to show a pilot's in-flight location.

### Electronic Innovations

A CENTURY after the first wig-wag field messages, the Signal Corps is interested not only in newer, swifter, more efficient communications methods, but today automatic data processing is being added to the world-wide Army Command and Administrative Network system. Militarized equipments for field army use now are under development. The first model of MOBIDIC, a large mobile all-purpose computer, is to be delivered for installation this year.

Microminiaturization techniques also are being stressed, with the Corps in the forefront of this development. Some items already in production include amazingly small radios, such as the tiny belt-pack or helmet radio that can be carried by the individual soldier.

STILL other advances in elaborate tactical communications include mobile and air-transportable long-range communications centrals; and satellite communications, such as the solar cell conversion for powering satellite radios, developed by the Corps and first used on Vanguard I. A still more complex solar ring was designed and



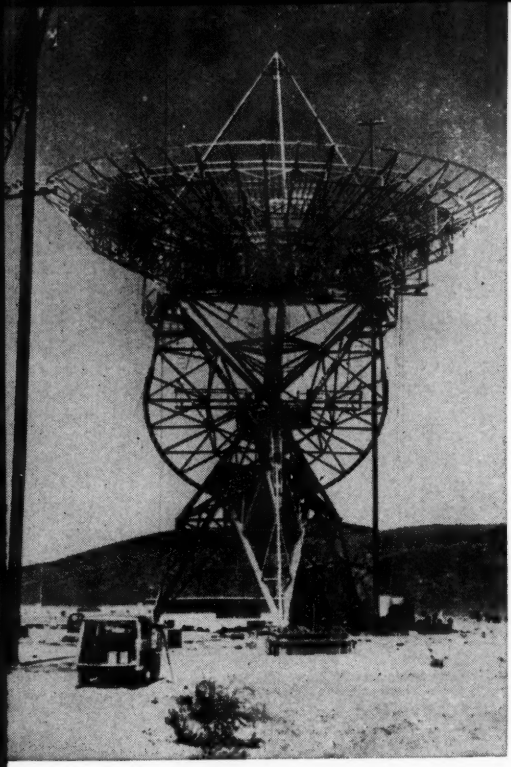
Contrasting with electric signals, carrier pigeons also proved valuable, were still used as late as World War II.

As in earlier wars, photographers of World War II worked under fire. Right center, lineman makes repairs on Korean hillside.

constructed for Explorer VII which went into orbit in October 1959.

Although no longer responsible for weather bureau functions, the Corps still continues work in meteorological fields. Recently it helped carry this science into space when a cloud cover weather observation satellite was placed in orbit 17 February 1959. Spin problems prevented obtaining successful cloud cover photos, but satellites

In one of outstanding Signal Corps still pictures of World War II, Sicilians watch anxiously as medical corpsman administers plasma.



This 85-foot diameter antenna built to track space vehicles will range to four billion miles when completed.

such as Tiros under the National Aeronautics and Space Administration have overcome this difficulty. The experiment marked a big forward step in employing satellites for cloud cover study and related forecasting and storm detection.

## Speeding Communications

DURING its first hundred years, the Army Signal Corps has advanced from utilization of flags and flying torches slowly spelling out words, to electronics for whose capabilities words and speech are much too slow, to lightning-fast electronic computing machines, to electric signals which flash millions

Diana moon radar, left, also is used to track earth satellites. At right, Missile Master height finder radar scans skies, coordinating defenses of Washington-Baltimore area.

A far cry from Civil War towers, robot airborne television spots enemy activity, returns pictures from 40 miles away.

of items of data to the ends of the earth in seconds.

Looking into the not-too-distant future, the Corps is working toward the development of a Universal Integrated Communication System which will provide personalized service, high-speed automatic switching, and any mode of transmission such as video, data, facsimile, voice and records communications on a completely secure basis. This system would also entail the use of communications satellites as repeaters for ground stations. Even now, as the first phase of Project Notus, the Corps is developing Courier—a prototype of a global communications network of communicating satellites.

Through advances such as these, the Corps expects to send signals into the infinity of space, so that when man-carrying satellites encircle the earth and then set out for the planets, the Corps will be providing the necessary communications. In this swiftly approaching future the wigwag flag and flaming torch of the U. S. Army Signal Corps will symbolize an entirely new era in communications.

Like gigantic golf ball on movable tee, plastic balloon on mobile trailer houses Frescanar radar antenna.

***Amid massed colors, 145 battle streamers set off this***

# Banner Of Proud Heritage


BECOMING increasingly familiar to troops wherever the U. S. Army is stationed, the official Army Flag, although only four years old, is a constant reminder of the proud history of the Army. Today at reviews and ceremonies, it flies with the new 50-star national flag adopted to mark entry of Hawaii as a state.

Central design of the Army flag is the original War Office seal, authorized by the Continental Congress on 8 March 1779, four years after the Army itself came into being on 14 June 1775.

The first official U. S. Army Flag was presented by Vice President Richard M. Nixon to Secretary of the Army Wilber M. Brucker in a ceremony at Washington, D. C., on 13 June 1956. On the following day—Flag Day and the 181st anniversary of the establishment of the Army—the new flag was unfurled at Independence Hall, Philadelphia, by Secretary Brucker.

Although various elements of the Army have their colors and distinguishing flags, none had previously served for the Army as a whole. The new Army flag was designed to meet the need for one to represent the entire Army on appropriate occasions.

The flag, in the national colors of red, white and blue with a yellow fringe, was made of white silk with the War Office seal embroidered in blue. Beneath the seal is a broad scarlet scroll with the inscription "United States Army" in white letters. Below the scroll the numerals "1775" appear in blue to commemorate the year in which the Army was created with appointment of General George Washington as Commander-in-Chief.

The original War Office seal is described as:

"A cannon in front of a drum with two drumsticks; below the cannon three cannon balls. A mortar on a trunion and below the mortar two powder flasks. In the center a Roman breastplate over a jupon (leather jacket). Above the breastplate rises a plane sword with the pommel and guard supporting a Phrygian cap between an esponton (pike) and an organizational color on one side, and a musket with a fixed bayonet and the National Color on the other side. Above is a rattlesnake holding in its mouth a scroll inscribed 'This We'll Defend'."

The cannon, cannon balls, mortar and powder flasks are of the Revolutionary War type. The Phrygian cap is the traditional symbol of liberty.

The War Office was at first officially known as "A Board of War and Ordnance." The Department of War was created by Congress on 7 August 1789, and so remained until it was retitled the Department of the Army under the National Security Act of 26 July 1947.

### Campaign Streamers

REPRESENTING the campaigns in which the Army has participated, 145 streamers are attached below the spearhead of the flagstaff. Designed in colors of the respective campaign ribbons, they are embroidered with the designations of the campaigns and the years in which they occurred. Colors employed in the streamers represent the major campaigns:

Revolutionary War, scarlet with white stripe; War of 1812, scarlet with two white stripes; Mexican War, green with one white stripe; Civil War, equally divided blue and gray; Indian Wars, scarlet with two black stripes; War with Spain, yellow with two blue stripes; China Relief Expedition, yellow with blue edges; Philippine Insurrection, blue with two red stripes; World War I, double rainbow; Korean Service, light blue bordered on each side with white, with a white center strip.

For World War II, three main theaters have distinctive markings. The American Theater is blue with two groupings of white, black, red and white stripes; with blue, white and red in the center. The European-African-Middle Eastern Theater is green and brown with two stripe groupings—one of green, white, red; the other of white, black and white stripes; all with blue, white and red stripes in the center. The Asiatic-Pacific Theater is orange with two white, red and white stripe groupings; with blue, white and red stripes in the center.

### Design and Distribution

THE Army flag was designed by the Heraldic Branch, Office of Research and Engineering, Office of the Quartermaster General. Research on background material was begun in July 1955. Secretary Brucker selected the final design from several tentative ones.

The flag presented by Vice President Nixon to Secretary Brucker was hand-embroidered. Since then a limited number of additional flags, with the design appliqued rather than embroidered and without campaign streamers, have been assigned to the various Army headquarters, service schools and other locations designated by the Secretary of the Army.

***In the Army's oldest Regular unit, courage and determination are the constants which span time and technology,***

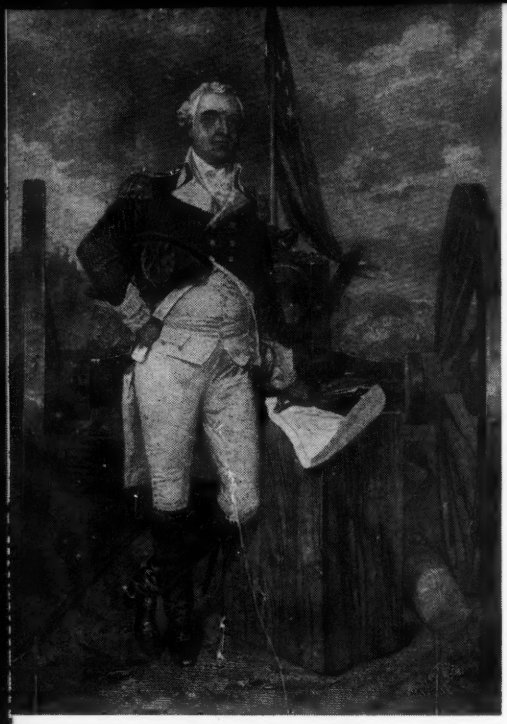
# From Muzzle Loaders

IN THE annals of the U. S. Army, there is probably no single active Army unit with a longer, unbroken tradition of dedicated service than Battery D, 1st Rocket

# To Missiles . . . . .

Howitzer Battalion, 5th Artillery, now redesignated Headquarters and Headquarters Battery, 1st Rocket Howitzer Battalion, 5th Artillery, part of the famous 1st Infantry Division at Fort Riley, Kansas.

Better known as Battery D of the 5th, or simply "Hamilton's Battery," this unit is the oldest on regular service in the U. S. Army.



**Under General Henry Knox, Hamilton's unit was transferred to Continental Army Artillery and finished Revolution at Yorktown.**

Although reorganized, reassigned and redesignated through the years, it has had a continuous, unbroken record of service in almost every major campaign in which the United States Army has engaged. A history of Hamilton's Battery is a chronicle of the growth and trials of the United States, as well as a history of the development of artillery since the Revolutionary War.

The unit was born back in the spring of 1776, when a nineteen-year-old lad named Alexander Hamilton was commissioned by the New York Provincial Congress and allowed to train and form his own "Company of Artillery," armed with six borrowed "two pounders." The unit first saw action on the southern tip of Manhattan, (now called the "Battery") on 12 July 1776, when it fired against two British ships—the first artillery salvo since the Declaration of Independence, proclaimed only eight days before.

Hamilton's unit caught the eye of General Nathanael Greene while it was training on the ground now occupied by New York's City Hall. Greene is reported to have introduced Alexander to General Washington, who conceived a high opinion of the lad's merits as a commander. With his valiant little unit, Hamilton went on to provide Washington with valuable support at the Battles of White Plains and Long Island and to cover Washington's retreat across New Jersey.

At the battle of Trenton, Battery D was among the artillery which crossed the Delaware River, and its effective support made possible the first real victory of the United States Army. Since the infantry's powder was wet, Washington had to rely on his artillery to provide fire and shock action—one of the first American commanders to substitute firepower for shock action. As a result of this lesson artillery was more effectively employed in later battles.

Hamilton was promoted to lieutenant colonel and Aide de Camp to Washington on 1 March 1777.

On 17 March 1777, Hamilton's unit was transferred to the Continental Army Artillery under General Henry Knox. It finished the war at Yorktown.

On 2 June 1784, the Continental Army was reduced to but 80 artillerymen guarding military stores at West Point and Fort Pitt. Battery D traces its history to this small band.

Following the Revolutionary

War, the battery was reorganized and reassigned several times, retaining however its unbroken continuity of service. In 1791, it saw the first in a series of Indian actions when it fought the Miami Indians in the Northwest Territory under General St. Clair. Unable to find a suitable target as the result of elusive Indian tactics, the command was badly decimated. Other conflicts with the Indians during this period were the Seminole War (1835) in Florida, and an expedition against the Creek Indians.

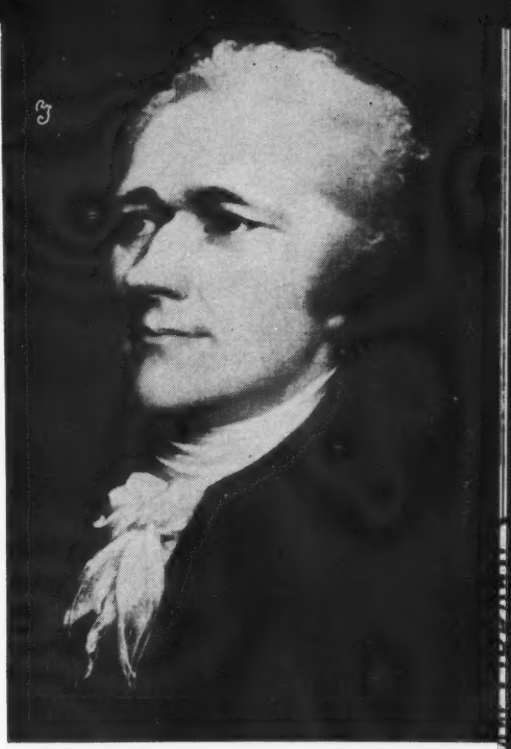
DURING the War of 1812, the Battery helped to prevent the British fleet from participating in the Battle of New Orleans, thus assuring General Jackson of this major land victory. At that time, the unit was part of the 1st Regiment of Artillery, composed of some twenty "companies" in all.

The famous battery was redesignated Company F, 4th United States Artillery Regiment on 1 June 1821, and retained this identity throughout the Indian, Mexican, Civil and Spanish-American Wars —until 13 February 1901.

During the Mexican War, Hamilton's old unit distinguished itself at Vera Cruz, Cerro Gordo, Contreras, and Chapultepec. The Regiment was at this time a part of Riley's Brigade. It was reported to have been at one time under the direction of Captain Robert E. Lee of the Engineers.

### Civil War Action

THE battery saw action during the Civil War at Manassas, Antietam, Chancellorsville and Gettysburg. In that war, artillery was introduced on an unprecedentedly large scale, and the outcome of the largest conflicts was often decided by the "King of Battles" under the command of such old campaigners as Stonewall Jackson and George Gordon Meade.

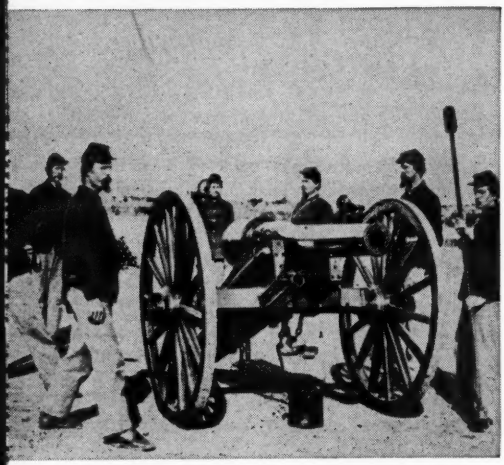


Alexander Hamilton was only 19 when he was commissioned by New York Provincial Congress to form "Company of Artillery."

At the Battle of Chancellorsville in the spring of 1863, Hamilton's Battery (then Battery F, 4th Field Artillery) distinguished itself by its heroic resistance in the face of a superior enemy. Its commanding officer, Lieutenant Muhlenberg, received a citation for his "courage, coolness and indomitable bravery . . . contending against fearful odds, until every gunner was killed and his ammunition exhausted."

During the Battle of Gettysburg, the battery assisted in the repulse of Lee's attack on Cemetery Ridge.

Guns and uniforms changed through the years but spirit has remained same as that of gunners who covered Washington's troops at Long Island.



In Civil War, uniform was blue but guns were still muzzle-leaders, above, while in World War I fast-firing cannon were in use.

THE period following the Civil War may have been relatively uneventful for other Army units, but the reverse was true for Hamilton's Battery. After a seven-year tour in Washington, D. C. and Maryland, the battery pulled a two-year tour in California, where it was stationed on Alcatraz Island, and another two year tour at Sitka, Alaska. In 1876 it became part of the Powder River expedition against the Sioux, during the Little Big Horn campaign.

From 1877 to 1898 the Battery was occupied with routine duties at a number of installations, on both sides of the continent, with time out for one Indian uprising. It was during this period, while at Governor's Island, New York, on 1 March 1882 that the battery received the distinctive oversized guidon which the unit is still authorized to carry. The guidon was presented by Hamilton's grandson.

IN THE Spanish-American War, the Battery saw action at Santiago, Cuba, although the Spanish commander surrendered before it got into position. From 1899 to 1902 it participated in suppressing the insurrection in the Philippines.

At the end of May 1907, during D Battery's second tour of duty in the Philippines, the battery first became a part of the unit to which it still belongs. The 5th Field Artillery Regiment was formed with Regimental Headquarters and 1st Battalion at Fort Leavenworth, 2d Battalion in the Philippines. From this point on, the history of D Battery becomes the history of the 5th Field Artillery.

## World War Record

IF THE Civil War saw the introduction of the semi-fixed artillery duel, World War I saw the apotheosis of this type of warfare. As part of the 155mm Howitzer Regiment of the 1st Field Artillery Brigade of the 1st Division, Battery D participated in many of the major battles involving U.S. Forces. After landing in France on 14 August 1917, the battery went into action at Montdidier-Noyon, Aisne-Marne, St. Mihiel, Meuse-Argonne, Lorraine and Picardy.

Between the wars, D Battery, as part of the 1st Infantry Division, was on garrison duty in the New England states, but when the country called it was back in action following the attack on Pearl Harbor.

ON 2 August 1942, the 5th Field Artillery Battalion sailed with the 1st Infantry Division for England. It supported the landings in invasions of North Africa and Sicily, and distinguished itself in both campaigns.

On D-Day, 6 June 1944, the Battalion hit the Normandy beaches with the rest of the Division, and participated in the hedgerow fighting and the subsequent breakout from the beachhead. The 5th helped the 1st Division infantry to breach the Siegfried Line. Later, it stopped the German drive on the north side of the Battle of the Bulge. From there, the Division recrossed the Siegfried Line and fought its way through Germany to the war's victorious conclusion.

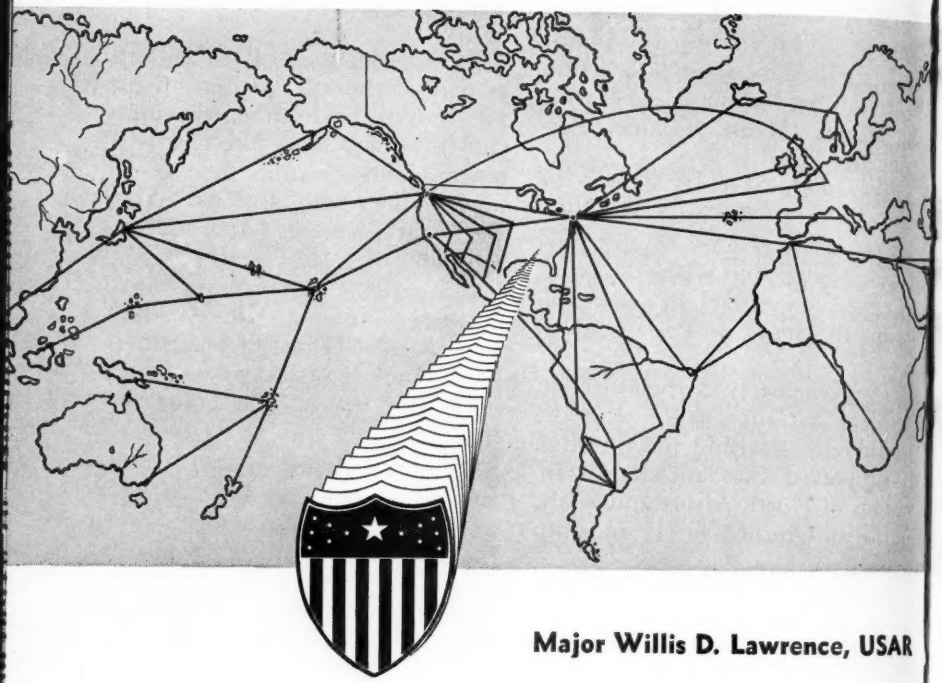
In 1957, Hamilton's old battery, as part of the 5th Artillery of the 1st Division, was among the units chosen as models for the new regimental reorganization then under way. Under the Combat Arms Regimental System, Battery D was redesignated Headquarters and Headquarters Battery, 1st Field Artillery Battalion, 5th Artillery. In April 1960 the 1st Field Artillery Battalion, 5th Artillery became the 1st Rocket Howitzer Battalion, 5th Artillery.

Transformed into a rocket howitzer unit, and streamlined to meet the exigencies of modern war, Hamilton's Battery has come to symbolize that combination of valor and technical progress which characterize the U. S. Army today.

Marking transition from muzzle loaders to Honest John rocket, famed unit parades in Kansas City on Veterans' Day.

***The Army and Air Force Postal Service fulfills a vital, world-wide role spanning***

# The First



**Major Willis D. Lawrence, USAR**

RECENT news dispatches headlined a startling new development—instant transmission of mail coast-to-coast by electronic facsimile process. When associated with the satellite development program and its potential for oversea relay of images via fixed satellites, this process gives promise—a not-too-fantastic promise—of some future means for instant transmission of military mail halfway around the world.

When and if such a great leap forward occurs, it will lessen the pressure on a dedicated and determined military staff headquartered in The Adjutant General's Office—a staff which has been hard at it for the last twenty years painstakingly building an efficient,

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*MAJOR WILLIS D. LAWRENCE, AGC-USAR, recently completed active duty for training as a mobilization designee in the Adjutant General's Office, Department of the Army.*

# Twenty Years

world-wide Army and Air Force Postal Service. So relentlessly has this staff been improving in efficiency that it will now take a drastic breakthrough in transmission techniques to achieve a major advance in the present system.

### Anniversary Year

THIS year marks the twentieth anniversary of the formal agreement between the War and Post Office Departments which created the Army Postal Service—and a turbulent twenty years they have been. The Service had barely gotten under way when it was plunged into one of the most difficult logistic tasks ever faced—delivering a constant flow of mail to some ten million assorted individuals, units and headquarters moving all over the world under war conditions. Only those close to the operation and aware of the myriad difficulties resolved can truly appreciate the magnitude of the task.

In the years since World War II and during the Korean War, a small combined staff of Army and Air Force personnel — working hand in hand with the U. S. Post Office Department—has continued to provide fast and reliable service for our troops overseas.

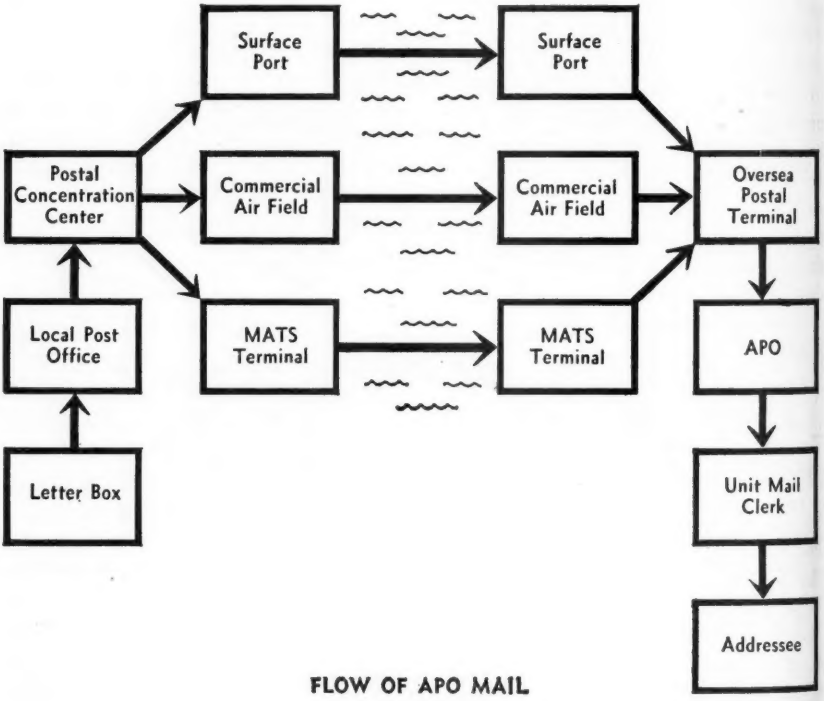
Their achievements have brought about a reorientation of military thinking toward postal service. It has always been valued as an important morale and administrative

service. Now there is growing high-level recognition of the essentiality of the system to the logistical support of the military mission, and realization of its importance as a means for the fast and sure transmission of high-priority supplies. Increasingly, these are being shipped through Army and Air Force postal channels.

Anyone who sees the Army and Air Force Postal Service headquarters staff in action is immediately impressed with their constant alertness for improving the service. Possibly it stems from their field experience, their training, or simply the challenge of their specialty. Maybe it's because they are continually under the gun—each customer of the system being an "expert" on mail transit time. With the postmark and delivery date, the customer has complete evidence on which to judge quality of service. It has to be good.

### Intricate Process

LIKE many people, you may sometimes dawdle for a week composing a personal letter. Once it's mailed, however, you take swift delivery for granted, just as you expect water to flow when turning on the faucet. Few realize what a dynamic, pulsating, intricate process is required to deliver that letter. The problem is usually seen in terms of one item casually dropped in the letter box, but actually that item is only one of millions, each going to a different location by




FLOW OF APO MAIL

Even while enroute, as these troops debarking in Korean port on way to new posts, mail from home reaches them.

differing priorities and modes of transportation.

The accompanying flow chart is designed to dispel some of the mystery about what happens to APO letters. First, there is the pickup from the letter box—distribution and dispatch by the local post office—consolidation en route to the postal concentration center near the port of embarkation—breakdown to unit at that point—dispatch overseas by sea or airlift—receipt at oversea postal terminal—transport to APO—and finally delivery to the unit mail clerk for distribution at "mail call."

Only the beginning and the end points of this process come to the attention of the "customer"—hence the workings of the Army and Air Force Postal Service are relatively little known.

The Army and Air Force Postal Service comes into operation at the Postal Concentration Centers near the ports of embarkation at New York, San Francisco and Seattle. Mail destined overseas via New York, for example, is processed by the Postal Concentration Center, a station of the New York City Post Office. Here the mail is sorted to APO, then to unit, and taken to ship or aircraft. This work is done in liaison with the U. S. Army Military Mail Terminal, a military postal unit located within the Postal Concentration Center, which provides organization breakdown data, routing instructions and directory service, and monitors the handling and transportation of military mail. Perhaps its most burdensome task is providing correct data for improperly or insufficiently addressed letters.

The Service is no small operation; it is strictly big business. There are 289 APOs in forty-four countries scattered around the globe. They serve almost as many people as the combined populations of Delaware, Vermont, Wyoming and Nevada. About 130 million pounds of letters and parcels are handled between the United States and oversea commands yearly, plus additional millions moving between locations overseas. Complicating the problem, the customers of this service are often

In camp or on maneuver, the mail goes through. At right, messenger receives packet of letters from field postoffice, and soon they are being read by men in foxholes.

hard to find; a good share of them are on the move much of the time.

Besides handling the mail, the system transacts an annual money order business which exceeds 130 million dollars, and sells more than 12 million dollars in stamps. Annual transportation costs for Army and Air Force mail is 51 million dollars. Of that amount approximately 20 million dollars is paid to the Post Office Department for transmission of "postage and fees paid" mail.

### Postal Liaison

CREDIT for smooth operation of this world-girdling network can be traced directly to the good working relations maintained with the U. S. Post Office Department. Liaison between the two huge systems could be difficult because they must mesh at so many points. Yet cooperation is excellent as the managers of both systems appreciate each other's problems.

Good relations are also strengthened by the Reserve Program which brings many civilian Post Office Department officials on active duty for training with the Army and Air Force Postal Service Headquarters where they get the military viewpoint firsthand. At times they find themselves working on military proposals they must later evaluate in their civilian capacities in the Post Office Department.

In a system such as this, a multitude of changes are necessary every day to adapt to reorganizations, movements, and varying schedules and routings. These are a regular part of the daily effort to improve service. At the same time, the Service strives to achieve a long-range view, constantly seeking ways to improve general procedures.

### Innovations

A TYPICAL improved procedure is "Operation Straight Shot" now under way. Post offices which serve oversea supply depots now segregate mailable material by APOs and units. It is then directed to the MATS terminals serving the APOs, thus eliminating circuitous routing through the Postal Concen-

tration Center. This innovation results in considerable savings to the Post Office Department for transportation and handling charges, and reduces transit by several days.

Another excellent example of streamlining is the adoption of a recent plan for payment of official postage and postal fees. Perhaps you have noticed the indicia "Postage and Fees Paid, Department of the Army" now used on official mail. Previously, reimbursement to the Post Office Department was based on a cumbersome system of procurement and usage reports. Postage for special services (such as airmail, registry, or insurance) was prepaid by affixing postage stamps. This required the purchase and stocking of stamps, weighing and rating of letters and parcels, and affixing stamps—all tedious tasks requiring thousands of manhours annually.

Negotiations between the Post Office Department and the Army and Air Force Postal Service Headquarters led to adoption of the new indicia in lieu of using postage stamps and reimbursements based on usage reports. No longer must military agencies perform the costly bookkeeping and clerical actions previously required. Again, Uncle Sam saves in administrative costs.

Another typical improvement was the recent change in address for mail going to APOs in the Canal Zone. From the early days of World War II, such mail was routed through New Orleans because of its proximity to the Canal Zone and availability of transportation. The Army and Air Force Postal Service recently determined that, due to transportation developments, more frequent and faster mail service can now be provided by having the Canal Zone mail routed through New York.

Many other innovations could be cited, such as the simplified money order system, use of large CONEX containers for surface shipment of mail, and use of postage meters overseas, each resulting in faster or safer mail service, or savings for the Government. Other improvements will be forthcoming —perhaps use of disposable mail bags for combat situations or new means to transport mail within the battle area.

The story of the military postal service during the first twenty years is a story of steady forward progress, with each improvement representing savings in hours and dollars. The net result has been the development of a sure, fast, safe and economical postal service which far surpasses that previously furnished any military force.

While in foxhole awaiting Aggressor "attack," soldier gets his mail swiftly and surely.

# NEWS of professional interest

## 50-Star Flag

Clarification of Department of Defense policy with respect to display of the new 50-star flag is contained in Department of the Army Circular 725-1. Certain organizations, mainly high headquarters units, are authorized to fly the new flag, while others are to utilize existing 48 and 49 star flags until unserviceable.

## Pershing Up

A third successful launching of a Pershing missile recently was completed at the Atlantic Missile Range, Cape Canaveral, Florida. The launch was similar to tests on 25 February and 20 April in that only the first stage was fired, with the device weighted to simulate the actual motor and a dummy nose cone used.

Pershing is a two-stage, solid propellant missile now under research and development at the Orlando, Florida, plant of the Martin Company. It is the Army's longest range surface-to-surface missile.

A significant new feature of the Pershing missile system is its high mobility and fast reaction time. Entirely air-transportable, it can be erected and fired in a matter of minutes.

## NATO Nike Firings

First of an annual series of service practice firings by North Atlantic Treaty Organization air defense batteries, armed with Nike missiles, recently was begun at Fort Bliss, Texas. Italian Nike batteries were the first of 36 NATO units to fire in the round. Units from Belgium, Denmark, France, Germany, Norway and Turkey were scheduled for later firings. Each organization will launch a Nike-Ajax and a Nike-Hercules against radio-controlled target drones at the Army's McGregor Range in New Mexico, part of the U. S. Army Air Defense Center at Fort Bliss. All units had been trained and were issued their equipment at Fort Bliss before they took up defensive positions in Europe.

## Battle Group to Far East

The 2d Airborne Battle Group, 508d Infantry, 82d Airborne Division has been designated to be added to the U. S. Army Pacific Forces and will be stationed on Okinawa. Reinforced with artillery, engineer, aviation maintenance and other supporting units from the division, the Battle Group will help provide the required back-up support for combat units anywhere in the Pacific.

## Mauler Missile System

Contract for a new highly mobile battlefield air defense system known as Mauler has been let to Convair Division of General Dynamics Corporation, Pomona, California, covering the first year of development as part of the Army modernization program. Mauler will be a compact, highly mobile weapon using solid-fuel radar-guided missiles primarily to destroy enemy short-range ballistic missiles and rockets, as well as high performance tactical aircraft which bomb, strafe, harass or reconnoiter near forward battle area positions.

Development of the new system anticipates that any future enemy will use tactical missile and modern jet aircraft in close support of his own forward units. Each Mauler unit will be contained entirely in a single tracked vehicle of stand-

ard design, fully mobile and capable of delivering accurate fire even while moving. The Army Rocket and Guided Missile Agency, part of the Army Ordnance Missile Command at Redstone Arsenal, Huntsville, Alabama, has overall charge of Mauler development.

### Radiological Test Area

A radiological test area—designed to provide nuclear radiation similar to that from radioactive fallout but under controlled conditions—recently was unveiled by the Army Chemical Corps at Dugway Proving Ground, Utah. It will be used to determine effects of radiation on weapons, equipment and personnel, and on construction such as foxholes and shelters.

The test area is a circular surface composed of some six and half acres of "soil cement" made by mixing cement with sandy soil. Surrounding the area is a thick wall of concrete and an earth shield embankment. Controlled amounts of radation in this area will be produced by the radioactive isotope Cobalt 60. Dose-rate of radiation may be varied for different tests.

### Missile Monitor to USAREUR

Missile Monitor—the first operational high speed data processing electronic air defense system—now is being deployed to operational sites with the U.S. Army in Europe. The system provides U.S. forces with a vital electronic capability in defending against possible air attack; it is capable of detecting, tracking and storing information on large numbers of airborne targets, and the readiness and actions of each air defense missile battery.

### People-to-People

Supporting the President's People-to-People Program on a year-around basis, United States Army Europe sponsors a variety of activities to improve troop-community relations.

Currently, students attending high schools for dependents of American military personnel in Germany and France are writing compositions about famous figures of the host country. After German-American and Franco-American committees have selected prize-winners at local ceremonies, top winners for each country will meet the heads of state or other government leaders. Final ceremonies in

Bonn and Paris will be held in early summer. When a similar contest was run in Italy last year, the Italian Minister of Education awarded the prize in a ceremony which received nationwide television, motion picture, press coverage.

U. S. Army Band concerts play to large and appreciative audiences. The Seventh Army Symphony Orchestra, composed of U. S. Army personnel, last year played to an audience of 70,000 at 87 concerts.

Other community relations events in the European area include German-American Friendship Week held annually. Local European-American committees, such as the German-American Advisory Councils, assist on a year around basis in projects affecting community living.

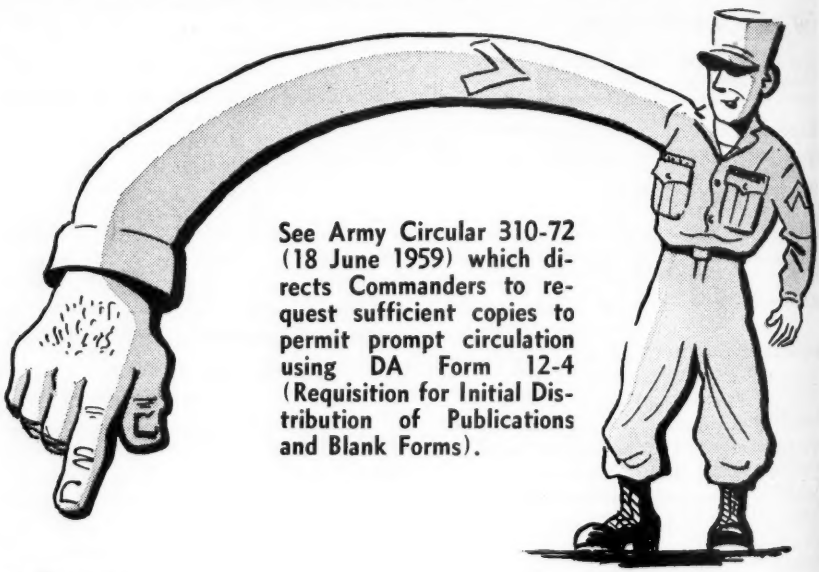
### BARC on Order

Six giant amphibious self-propelled lighters, or BARCs, are being built for the Army Transportation Corps. Weighing 100 tons, the BARC normally carries a 60 ton payload but in emergency can carry its own weight. It rolls on 9-foot-diameter wheels, each propelled by a 200-horsepower diesel engine. Two marine propellers drive the craft on water. Regarded as the world's largest amphibian, the BARC measures 62½ feet long, 26½ feet wide, and 19 feet high. Construction contract for the six units has been awarded to Transval Electronics Corporation, El Segundo, California.

### Irradiated Food Study

A new program aimed at accelerating research on irradiated foods—principally pork, beef and chicken—for military use has recently been announced. It will be a revised six-year, five million dollar project, concentrating on food items considered of prime military importance which have shown promise as a result of previous Army research. The new program is expected to be operational in two years.

## Do You Get the Digest Regularly?



See Army Circular 310-72 (18 June 1959) which directs Commanders to request sufficient copies to permit prompt circulation using DA Form 12-4 (Requisition for Initial Distribution of Publications and Blank Forms).

**Distribution:**

**To be distributed in accordance with DA Form 12-4 requirements.**

# Air Car Under Test


Two air cars—designed for travel over land or water on a cushion of air—recently were delivered to Fort Eustis, Virginia, for extensive testing and experimentation. In line with modernization requirements, the Army has been studying the "ground effect" phenomenon as a possible way of drastically improving surface mobility.

The air cars—purchased from Curtis-Wright Corporation, Wood-Ridge, New Jersey—are expected to carry a payload of 1,000 pounds of cargo or four passengers up to 35 miles per hour over unobstructed terrain. The cars resemble conventional automobiles without wheels, are about 21 feet long, eight feet wide, five feet high, and travel on a six to 12 inch cushion of air blown into the area between the base of the car and the land, water or snow surface.

A fan system driven by a pair of 180 horsepower aircraft engines is used for lift, propulsion and to change direction. Driver controls include a conventional steering wheel and throttle, used for directional guidance and braking.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